

THE
PRACTICAL PHYSICIAN
—AND—
HOME APOTHECARY.

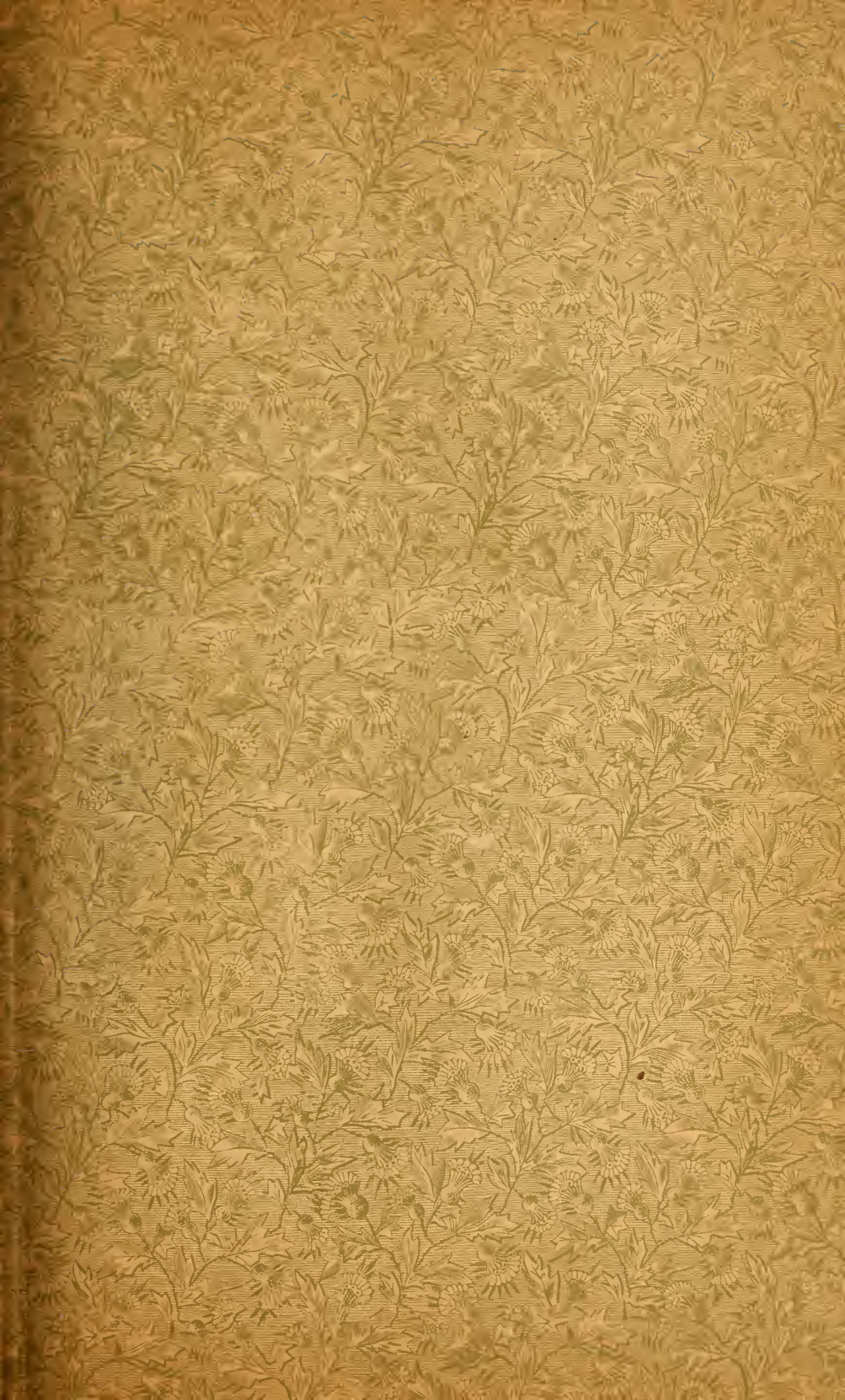
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THE
Practical Physician

AND

HOME APOTHECARY,

BY

✓
GEORGE HENCKEL

WITH

MEDICAL CONTRIBUTIONS BY EMINENT PHYSICIANS.

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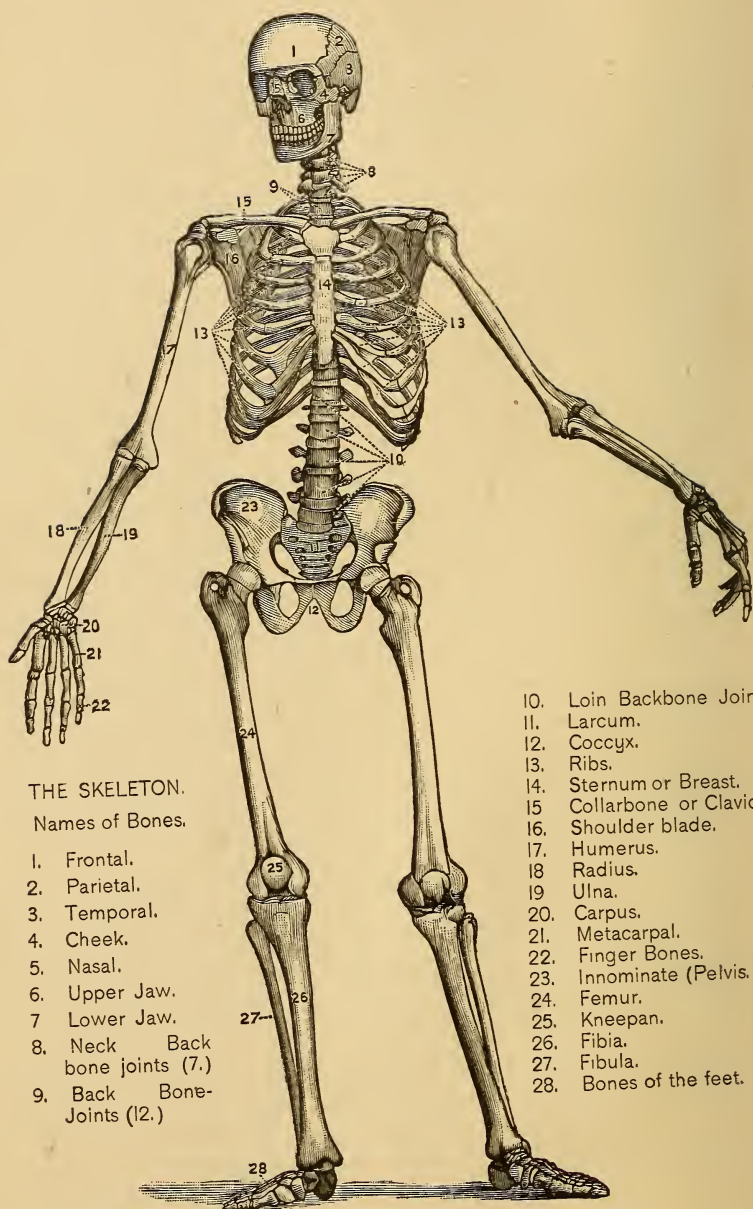
PREFACE.

Since the creation of man, there has been no subject that so immediately concerns the life and happiness of the individual, the love and harmony of friends and the prosperity of a country, as good health. The majority of mankind know less about themselves as far as their own body is concerned, than they do about their surroundings. When the house in which they live or the clothing they wear becomes out of order the father or mother, know, how to make amends. Have you, dear reader, ever thought how little you know about the abode, which your soul inhabits? No then when you are in health and do not know of the existence of the material body, you either do not take the time, or do not care what becomes of this body in which mind and matter so intimately commingle. But when you are afflicted with sickness, which always comes more or less unexpected, you are puzzled and do not know what to do. Of course there are many people who have made a life study of the human body and the numerous diseases to which it is an heir. These doctor's, surgeons and specialists are all anxious for patients in their numerous lines and for their attention to the sick, their fees are usually reasonable but occasionally their demands overreach the capacity of the pocketbook of the patient. The object of this volume is that when sickness does appear that you may have a counselor at hand and weapons to combat the approaching disease without incurring large doctor's bills.

Out of the fullness of an observing earnest and truthful nature have come the words of instruction, of advice and of warning that go to make up the pleasant and inviting pages of this book, words and directions that apply to and concern every boy and girl, man or woman, married or single, who believe in keeping the body in a good, pure and healthy condition.

It is your duty to acquaint yourself with the wonderful machinery of the body and when any part becomes out of order, you will know how to remedy the fault, providing you study carefully this book and learn the uses of the contents of the Home Apothecary.

THE AUTHOR.



THE SKELETON.
Names of Bones.

- | | |
|--------------------|-----------------------------|
| 1. Frontal. | 10. Loin Backbone Joints. |
| 2. Parietal. | 11. Larcum. |
| 3. Temporal. | 12. Coccyx. |
| 4. Cheek. | 13. Ribs. |
| 5. Nasal. | 14. Sternum or Breast. |
| 6. Upper Jaw. | 15. Collarbone or Clavicle. |
| 7. Lower Jaw. | 16. Shoulder blade. |
| 8. Neck Back | 17. Humerus. |
| bone joints (7.) | 18. Radius. |
| 9. Back Bone- | 19. Ulna. |
| Joints (12.) | 20. Carpus. |
| | 21. Metacarpal. |
| | 22. Finger Bones. |
| | 23. Innominate (Pelvis.) |
| | 24. Femur. |
| | 25. Kneecap. |
| | 26. Fibia. |
| | 27. Fibula. |
| | 28. Bones of the feet. |

The Practical Physician

OF THE HUMAN BODY.

IN considering the ailments to which the human body is an heir it becomes apparent that a brief description must be given of it, especially for the enlightenment of those, who have not concentrated their mind, or even given a thought, upon the most perfect of our Creator's handy work:

THE HUMAN BODY.

For every abode, whether we inhabit same, or our soul, we find that in its construction, a solid frame work exists, for the support, as in the human body, for the softer parts, as well as forming cavities requisite, for the proper protection of the vital organs. We find this frame work of our bodies in the various bones, composing what is commonly called

THE SKELETON.

The entire skeleton of an adult consists of 204 bones enumerated and classified on the illustration embodied in this treatise.

Bone is one of hardest compositions in the body, but possesses to a certain degree, a toughness and elasticity. In examining it closer (by sawing the bone of any animal transversely) we find it to consist of two distinct tissues, one a hard mass, like ivory, the other consisting of slight fibres, which join irregular and form a sort of lattice work. The hard and compact tissue is always on the exterior, while the other forms the inside, acting as an additional brace, to withstand strain, as well as being the repository for the marrow in the cavities formed by the fibrous tissues.

All bones are covered by a tough membrane called the periosteum, which adheres to the surface in nearly every part, excepting at those

places, where the cartilages and tendons are attached. This membrane is full of minute blood vessels, and it is thus that the bone receives its nourishment by the passing of these blood vessels into the small opening of each bone.

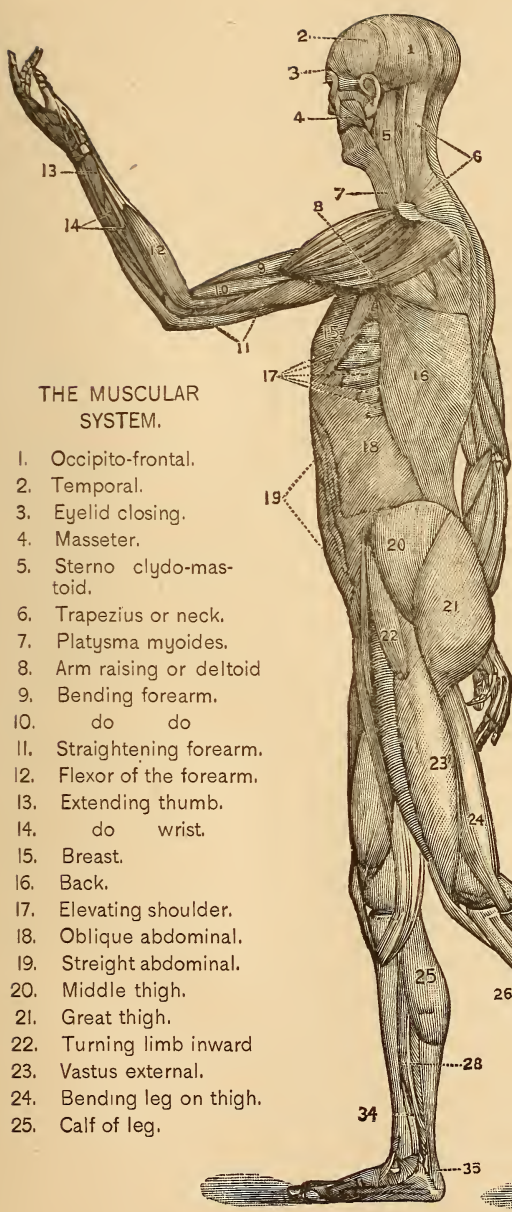
The various bones in the human body are connected together at the different parts of their surface and such connections are termed the JOINTS. Some are movable, some are not, as for instance the bones of the face and skull. The greater number of joints are movable and are formed by the approximation of two long surfaces covered with cartilages, connected by ligaments, and lined by a membrane. The movements admissible in joints, in a healthy person, are almost in any direction. The ligaments, which so greatly assist in these movements, are of various forms to meet the emergency in the shape of the bone. They are pliant and flexible so as to allow the most perfect freedom of movement, but strong, tough, and inextensible, so as not readily to yield under the most severely applied force, in consequence of which they are admirably adapted to serve as the connecting medium, or hinges between the bones, in movable joints.

THE MUSCLES.

The muscles are the active organs of locomotion. They are formed of reddish fibres and are endowed with the property of contractility. Two kinds of muscular tissue are found in the animal body; namely, that of *Voluntary* or animal life, and that of *Involuntary* or organic life.

The *Voluntary Muscles* are capable of being either exerted or controlled by the efforts of the will. They are composed of bundles of fibres inclosed in a delicate web and each bundle consists of numerous smaller ones, also inclosed in a similar covering.

The *Involuntary Muscles* or of organic life consist of flattened bands or of elongated, spindle shaped fibres, flattened, and are of a pale color. These muscles we find in the alimentary canal, forming the muscular coat of the digestive tube, from the middle of the gullet to the anus; in the posterior wall of the bronchial tubes; in the gall bladder and common bile duct, in the basin of the kidneys, in the ureters and bladder, and in the urethra. In the female it is met with in the vagina, uterus or womb, in the tubes and ligaments surrounding same; in the male we find these muscles in the scrotum, the semen carrying vessel, the semen vessel and prostrate gland. They are also found in both sexes in the cavernous bodies; in the coats of the arteries,



THE MUSCULAR SYSTEM.

1. Occipito-frontal.
2. Temporal.
3. Eyelid closing.
4. Masseter.
5. Sterno clydo-mas-toid.
6. Trapezius or neck.
7. Platysma myoides.
8. Arm raising or deltoid
9. Bending forearm.
10. do do
11. Straightening forearm.
12. Flexor of the forearm.
13. Extending thumb.
14. do wrist.
15. Breast.
16. Back.
17. Elevating shoulder.
18. Oblique abdominal.
19. Streight abdominal.
20. Middle thigh.
21. Great thigh.
22. Turning limb inward
23. Vastus external.
24. Bending leg on thigh.
25. Calf of leg.

26. Bending foot.
27. Extending toes.
28. Soleus.
29. } Act together in
30. } drawing foot back.
31. Flexor of foot on leg.
32. Bends little toe
33. Extends the great toe.
34. Bends toes towards the sole.
35. Tendo-Achilles, this is the strongest tendon in the body.

in most veins and lymphatic vessels; in the iris and ciliary muscles of the eye, and in the skin, as those which control the hair.

Blood-vessels are distributed in considerable abundance in the muscles. In the voluntary muscles the capillaries, which are of extremely minute size, form narrow oblong meshes, which run in the direction of the fibres.

The *Absorbing* or *Lymphatic Vessels* in muscles are few in number and appear to exist only in the larger muscles.

The *nerves* of voluntary muscles are of large size. The larger branches pass between the bunches of the muscles, and, subdividing, unite to form primary communications, which are also called the plexus of the nerves; from these, finer bundles or single nerve tubes, pass between the muscular fibres and forming loops return to the plexus.

Each muscle is invested externally by a thin, cellular layer forming what is commonly called a sheath, or fascia, which covers the outer surface and serves as a bond of connection between them.

The muscles are connected with the bones, cartilages, ligaments and skin, either directly or through the intervention of fibrous structures, called tendons. Where a muscle is attached to the bone or cartilage the fibres terminate in blunt extremities upon the periosteum or the membrane covering the latter and do not come in direct relation with the bony or cartilagenous substances. Where muscles are connected with the skin they either lie as a flattened layer beneath it or are connected with its tissue by larger or smaller bundles of fibres, as in the muscles of the face.

The muscles vary considerably in form. In the limbs they are of considerable length, especially the superficial ones, the deep ones being generally broad; they surround the bones, and form an important protection to the joints. In the trunk they are flattened and expanded, forming the wall of the cavities which they inclose.

Their sizes presents considerable variation; the *Gastrocnemius* forms the chief bulk of the back of the leg, and the fibres of the "Tailor's" muscle, which allows the position usually assumed by the tailors is nearly two feet in length, while the stirrup muscle of the internal ear, weighs only about one grain and its fibres are not more than two lines in length. In each case, however, they are admirably adapted to execute the various movements they are required to perform.

The names of the muscles have been derived from various sources;

namely, from their situation; from their direction; from their uses; from their shape; from their number of divisions; and from their points of attachment.

For the names and location of the muscles, the reader is referred to the illustration of the muscular system of the human body, as well as organs intimately connected with the muscles.

The tendons are connected on the one hand with the muscles; and on the other with the bones, cartilages, ligaments, and membranes.

THE ARTERIES.

The arteries are cylindrical tubular vessels, which serve to convey blood from both ventricles of the heart to every part of the body. These vessels were named arteries (which means to contain air) from the belief entertained by the ancients that they contained air. This opinion has been, however, refuted long ago, inasmuch as it has been shown, that these vessels, though for the most part empty after death, contain blood in the living body.

The pulmonary or lung artery, which arises from the right ventricle of the heart carries venous blood directly into the lungs, from whence it is returned by the pulmonary or lung veins into the left auricle of the heart. This constitutes the lesser or pulmonary circulation. The great artery, the Aorta, which arises from the left ventricle, conveys arterial blood to the body generally; from whence it is brought back to the right side of the heart by means of the veins. This constitutes the greater or systemic circulation.

The distribution of the systemic arteries is like a highly ramified tree, the common trunk of which, formed by the aorta or great artery, commences at the left ventricle of the heart, the smallest ramifications corresponding to the circumference of the body and the contained organs. Arteries are found in nearly every part of our bodies, with the exceptions of the hair, nails, outer portion of skin, cartilages and the cornea; the larger arteries usually occupy the most protected situations, where they are less exposed to injury.

The arteries in their distribution communicate freely with one another, forming what is called an anastomosis, or inosculation, and this communication is very freely between all branches. The inosculation is especially found where great freedom and activity of the circulation is necessary, as in the brain; in the abdomen, and in the limbs. These inosculations are of great interest to the surgeon as by

their enlargement, that a collateral circulation is established after the application of ligature to an artery, for the cure of widening and tumors in arteries.

The smaller arteries inosculate more than the larger, and between the smallest twigs, these inoculations become so numerous as to constitute a close network, that prevades nearly every tissue of the body.

The arteries are dense in structure, of considerable strength, highly elastic and when divided transversely, they preserve, although empty their cylindrical form. They have three coats, internal, middle and external. Arteries are also provided with blood vessels for their own nutriment, and nerves for the control of their actions.

THE CAPILLARIES.

The smaller arterial branches, with few exceptions, terminate in a network of vessels which prevade nearly every tissue of the body. These vessels from their minute size are termed capillaries (from capillus a hair). They are interposed between the smallest branches of the arteries and the commencing veins, constituting a network. The diameter of the capillaries varies in the different tissues of the body, their usual size being about 1-3000 part of an inch. The smallest are those in the brain and the mucous membrane of the intestines; the largest those of the skin, and the marrow of the bones.

The form of the capillaries also varies and can be classified in rounded, elongated and looped meshes.

THE VEINS.

The veins are the vessels which serve to return the blood from the capillaries of the different parts of the body to the heart. They consist of two distinct sets of vessels, the pulmonary and systemic

The *Pulmonary Veins* unlike other vessels of this kind, contain arterial blood, which they return from the lungs to the left auricle of the heart.

The *Systemic Veins*, return the venous blood from the body generally to the right auricle of the heart.

The *Portal Vein*, an appendage to the systemic venous system is confined to the abdominal cavity, returning the blood from the digestive apparatus located in the abdomen and carrying it to the liver by a single trunk of large size, the portal vein. From the liver the blood is conveyed to the lower vena cava by means of the liver veins.

The veins, like the arteries, are found in nearly every tissue of the body; they commence by minute plexus, which communicate with the capillaries, the branches of which, uniting together, constitute the trunks, which increase in size, as they pass toward the heart, from the termination of larger branches in them. In form, the veins are not quite cylindrical, like the arteries, their walls being collapsed when empty. Veins are supplied with valves in their interior, for the apparent purpose to prevent the venous blood from retrograding toward the capillaries. The veins communicate very freely with one another, and this communication exists between the large trunks, as well as between the smaller branches. The walls of the veins are thinner than those of the arteries, which is due to the small amount of elastic tissue they contain. The veins nearest the surface, usually have thicker coats than the deep seated ones. Like arteries, they possess three coats, internal, middle and external.

The veins are also supplied with nutrient blood vessels, like the arteries, but nerves, as a general thing are not found upon them.

THE LYMPHATICS OR ABSORBENTS.

The Lymphatics have derived their name from the appearance of the fluid contained in their interior (lymp^ha water.) They are also called ABSORBENTS from the property they possess of absorbing certain materials for the replenishing of the blood, and conveying them into the circulation.

The lymphatic system includes not only the lymphatic vessels and glands through which they pass, but also the LACTEALS or CHYLIFEROUS vessels. The lacteals are the lymphatic vessels of the small intestines, and differ from the lymphatics generally, only, in that they contain a milk-white fluid, the chyle during the process of digestion, and contain is readily seen through them. They are found in nearly every texture and organ of the body, with the exception of the substance of the brain and spinal cord, the eyeball, cartilage, tendon, nails, cuticle, and hair. Their existence in the substance of the bone is doubtful.

Like the arteries and veins they possess three coats. They have nutrient blood vessels in their outer and middle coat, but no nerves.

The lymphatic or absorbent glands are small glandular bodies, situated in the course of the lymphatic and lacteal vessels.

All the lymphatic and lacteal vessels unite in one trunk, the *thoracic duct*, which conveys the great mass of lymph and chyle into

the blood. The *thoracic duct* commences in the abdomen by a triangular dilatation, the chyle receptacle and ascends behind the aorta, passing with it through the opening of the diaphragm, in front of the vertebral column. Opposite the fourth dorsal backbone joint it inclines towards the left side of the gullet. Opposite the upper border of the seventh backbone joint it curves downward above the under shoulder artery, and terminates near the angle of the junction of the under shoulder vein and left jugular vein. At the commencement the thoracic duct is about the size of a goose quill, diminishes as it ascends to about the middle and then gradually distends towards its termination.

The carefully executed engraving, showing the formation and circulation of the blood in the arteries and veins, together with the lymphatics, is especially referred to, for the situation and names of all the prominent blood vessels and absorbents in the human body. It was prepared especially for this work from recent dissections and the latest obtainable data, at much cost and labor by the author of this treatise. At a glance it is a complete object lesson, and gives a deep impression on the mind of the most wonderful chemico-mechanical apparatus, which keeps body and soul united until death.

This plate should also receive the earnest attention of the readers when studying the organs destined to accomplish the acts of life, usually called "FUNCTIONS."

So far as practicable the names are in plain English, but the indulgence of the dear reader is asked for, when in the nomenclature a latin or so-called professional name has slipped in. It was neither accident nor mistake, but unavoidable.

THE NERVOUS SYSTEM.

It consists of a series of centres of nerve matter called collectively, the cerebro-spinal, or *axis* the *ganglia*, the nerves, which are either connected with the axis or ganglia, and the outside terminations of the nerves forming the organs of the external senses.

The *axis* consists of two parts, namely, the spinal cord and the brain; the latter is usually subdivided into the cerebrum or brain proper; the cerebellum or small brain; the medulla oblongata, or upper bulbous expansion of the spinal cord; and the pons Varolii, which forms the connecting link between the first three mentioned subdivisions.

The *Spinal Cord* is a cylindrical elongated part of the cerebro-

spinal axis and is located in the hollow portion or canal of the backbone joints and is about eighteen to nineteen inches in length.

By making a transverse section of the spinal cord, it is found to consist of two nerve substances, the white and the gray. The former is the greater part and is situated externally. The latter or gray matter forms the internal part of the cord. The white substance of the spinal cord consists of nerve fibres, with blood-vessels. The gray matter consists of nerve fibres of various shapes and sizes, nerve cells and blood-vessels.

From the spinal cord radiate (31) thirty-one pairs of spinal nerves divided as follows :

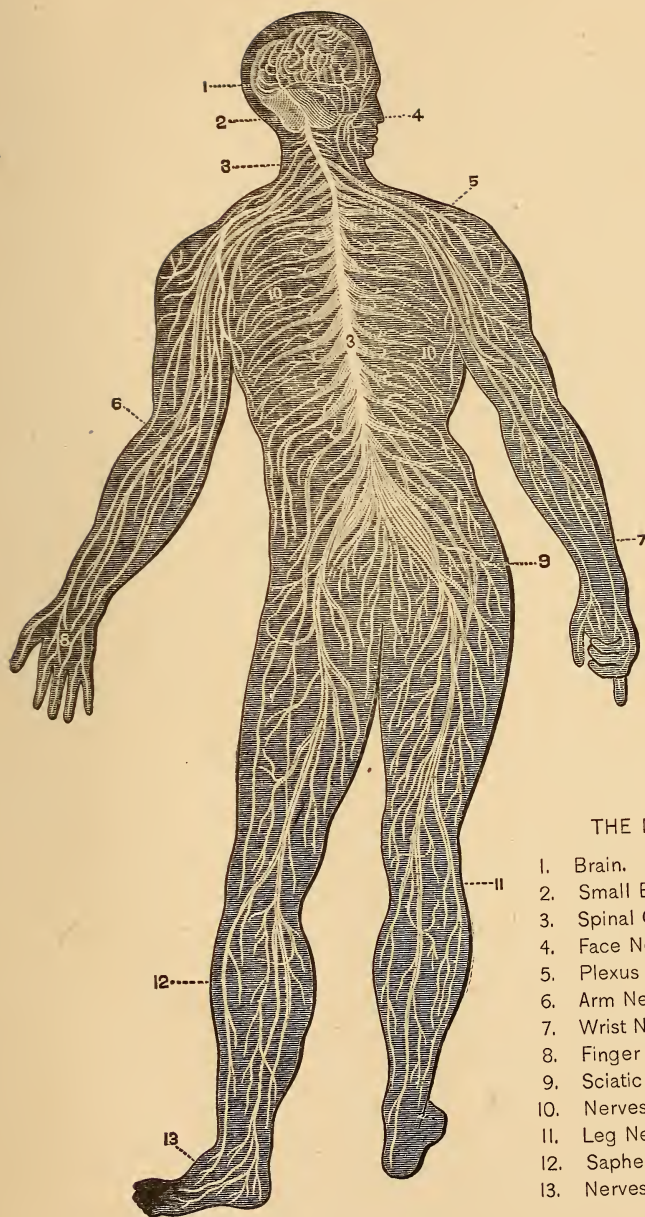
Neck	8 pairs.
Back	12 "
Loin region	5 "
Sacral region	5 "
End of backbone, or Coccyx	1 "

Each of these spinal nerves arises by two roots; one a motor root and the other a sensory root.

The *Cerebrum* or *Large Brain* is situated in the upper portion of the cranium, and subdivided into two halves or hemispheres, right and left. The outer surface of the brain consists of gray matter, which is mostly composed of nerve cells. The inner portion is mostly of white fibres, which connect with the cranial nerves, of which twelve pairs exist,

An enumeration may be of interest and is as follows:

1. Olfactory or nerves of smell.
2. Optic or nerve of sight.
3. Motor oculi or eye moving nerves.
4. Pathetic or eye muscle nerves.
5. Trifacial, nerves pertaining to orbits, jaw and parts of mouth.
6. Abducens, supplying rectus eye muscle.
7. Facial or nerves of the face and expression.
8. Auditory or nerve of hearing.
9. Glosso-pharyngeal or nerves of tongue, palate and taste.
10. Pneumo-gastric, or nerves which supply and regulate the organs of voice, respiration, the roof of mouth, gullet, stomach and heart.
11. Spinal accessory, a nerve as its name implies and accompanying parts of the spinal nerves.



THE NERVES.

1. Brain.
2. Small Brain.
3. Spinal Cord.
4. Face Nerves.
5. Plexus of Arm Nerves.
6. Arm Nerves.
7. Wrist Nerves.
8. Finger Nerves.
9. Sciatic or Hip Nerves.
10. Nerves between Ribs.
11. Leg Nerves.
12. Saphenous Nerves.
13. Nerves of Feet.

12. Hypoglossal, or motor nerve of the tongue.

The *cerebellum* or *small brain* is situated beneath the rear portion of the large brain and is divided from it by a membrane. It consists of white and gray matter, but is not convoluted like the brain proper, but furred.

The *sympathetic nerves* consist of a series of ganglia, connected together by intervening cords, and extending on each side of the vertebral column, from the base of the skull to the coccyx, they radiate irregular to all parts of the cavities of the body. Their functions are to preside over such actions of the organs as are beyond the control of the will, such as the beating of the heart, the circulation of the blood, the digestion of the food, etc.

Numerous communicating branches unite the sympathetic system of nerves with that of the spinal and cranial system.

The diagram of the whole nervous system will give a clear insight of the distribution of the voluntary or nerves under our control, as well as of the sympathetic nerves, which act independently of the human will-power. The diagram is necessarily schematic and does not pretend to give each and every nerve fibre radiating in the human body. Like other illustrations it is drawn from recent dissections and best obtainable data.

ORGANS OF SENSE.

These are five in number—viz: touch, taste, smell, hearing and sight.

TOUCH. The principal seat of this sense is the skin.

THE APPENDAGES OF THE SKIN are the nails, the hairs, sebaceous glands and their ducts.

TASTE. The tongue is the organ of the special sense of taste.

SMELL. What the tongue performs in taste, the nose does in smelling. By means of the peculiar properties its nerves possess, it protects the lung from inhalation of deleterious gases and assists the organ of taste in discriminating the properties food.

HEARING. This sense comprises three distinct parts, the external, the middle and internal ear.

The *external ear* consists of the expanded portion visible, named the auricle and the auditory canal. The former serves to collect the vibrations of the air, by which sound is produced and the latter conducts these vibrations to the tympanum or ear-drum. It is in this

canal that certain ceruminous glands secrete the ear-wax, which protects, as long as moist, the ear drum, as well as prevents the entrance of insects, being a poison to them.

The *middle ear* or *tympanum* is an irregular cavity and situated within the petrous bone, which by the way is of unusual hardness. In it is the tympanic membrane or drum-skin, which separates this cavity from the auditory canal of the external ear. This membrane receives the vibrations of the air and transmits them to the internal ear by the "chain of the bones" of hearing namely the *MALLEUS* or hammer, the *INCUS* or anvil, and the *STAPES* or stirrup. These small bones are connected with each other and with the walls of the tympanum by ligaments, and moved by small muscles.

The *internal ear* or *labyrinth*, is the essential part of the organ, receiving the ultimate distribution of the auditory nerve. It consists of three parts, viz: the vestibule, semi-circular canals and cochlea or shell of the snail.

The *vestibule* is the central cavity of communication between the parts of the internal ear, and is situated on the inner side of the tympanum, behind the cochlea and in front of the semicircular canal.

The *semicircular canals* are three long tubes situated above and below the Vestibule. These canals open into the vestibule by five orifices.

The *cochlea* bears some resemblance to a common snail-shell, it forms the anterior part of the inner ear, conical in form and placed nearly horizontal in front of the vestibule. In this cochlea we find a special fluid, called, perilymph, which holds solid particles in suspension, receiving the termination of the auditory nerve, destined to transmit to the brain the impressions of tonorous vibrations.

SIGHT. The apparatus of vision comprises the globe of the eye and the accessory organs which serve to protect and to move it. The globe of the eye is a spherical mass composed of several superposed coverings. The most external, is the *cornea* forming the white of the eye; its front part is transparent, and has received the name of *cornea*.

The next membrane, called *choroid*, is divided in front in two layers, one of which forms the *iris*, differently colored in different persons, and possessing in its centre an opening called the *pupil*. This opening can dilate and contract, and thus it measures the quantity of the luminous rays, which ought to penetrate into the eye.

The second layer of the choroid is the *ciliary ring*, situated behind the *iris* and in front of the *crystalline lens*, which is a bi-convex lens, transparent as crystal, as its name implies; its function is to refract the luminous rays. The partial or total opacity of the crystalline lens constitutes the disease known under the name of cataract. The crystalline lens is bathed in front by the *aqueous humor*, and behind it by the *vitreous humor*; these fluids are limpid and possess a refracting power, which is, however, less than that of the lens.

The most important and also innermost membrane of the ocular apparatus is the *retina*, formed by the expansion of the optic nerve, which is destined to transmit to the brain the impressions of the images painted on this membrane.

The size of the eye is pretty much the same in all men, and the differences observable in this respect are dependent on the extent to which the eyelids are opened.

The accessory parts of vision are the *orbits*, hollowed in the facial part of the skeleton, and containing the globes of the eye, the eyelids, the eyelashes and the eyebrows, organs destined to protect the eye from the irritation of foreign bodies, or from the impression of too strong a light.

The *lacrimal glands*, which secrete the tears and prevents the surface of the eye from becoming dry, and lastly, the muscles, which moves the eye in all direction, and the perverted action of which constitutes squinting.

THE ORGANS OF DIGESTION.

The apparatus for this purpose consists of the alimentary canal and certain accessory organs.

The *alimentary canal* is a membranous tube, consisting of several coats, one of which is a muscular one. Its length is in the neighborhood of thirty feet, varying somewhat in different persons. It commences at the mouth and extends to the *anus*. It is subdivided into different but continuous sections, which are named as follows:

The *mouth*, where mastication takes place, to which the following parts are accessory: The fleshy folds of the mouth—*lips*—forming the door to the entrance of the alimentary canal. The *cheeks* form the sides of the face and are continuations of the lips, in it are the muscles, which keep the food while in process of mastication under

the molars. The *gums* are the fleshy portions on the jaw-bone, surrounding the sockets of the teeth and their lower middle portions.

The *teeth*. The human being is provided during life with two sets of teeth, which make their appearance at different periods of life. The first appear in childhood and are, what is commonly known as temporary or milk teeth. The second set, which also make their appearance in early life, are the permanent teeth and these remain in tact, when properly cared for until old age.

The temporary teeth are twenty in number, four incisors, two canine and four molars in each jaw.

The permanent teeth are thirty-two in number—four incisors, two canine, four bicuspid and six molars in each jaw.

Each tooth consists of three portions, the *crown* or body, projecting above the gums; the *root*, entirely concealed and firmly imbedded in the sockets of the jawbones and the *neck*, bring that part between the other two portions.

The temporary teeth make their appearance about as follows:

Central incisors	seventh month.
Lateral do	seventh to tenth months.
Anterior molars	twelfth to fourteenth month.
Canine	fourteenth to twentieth month.
Posterior molars	eighteenth to thirty-sixth month.

The teeth of the lower jaw make their appearance a little sooner than those of the upper.

The eruption of the permanent teeth takes place at the following periods.

First molars	6½ years.
Two middle incisors	7th year.
Two lateral incisors	8th year.
First bicuspid	9th year.
Second bicuspid	10th year
Canine	11th to 12th year.
Second molars	12th to 13th year.
Wisdom teeth	17th to 21st year.

The *palate* forms the roof of the mouth, consisting of two portions, the hard in front and the soft palate behind.

In the cavity made by the roof of the mouth and dental arches is the tongue.

The *salivary glands* which furnish the saliva are three in number, and are located as follows:

The *parotid*, in front of the ear.

The *submaxillary*, below the jaw.

The *sublingual*, is the smallest, beneath the mucous membrane of the floor of the mouth.

The *pharynx* is that part of the alimentary canal, which is placed behind the nose, mouth and larynx. It has openings communicating with the nose, the two ears by the *eustachian tubes*, the mouth, larynx and gullet.

The *gullet* or *oesophagus* is a muscular canal extending from the pharynx to the stomach; about nine inches in length.

The greatest portion of the alimentary canal is situated in the abdomen, by far the largest cavity in the human body. In it is also located the principal organ of digestion.

The *stomach*, which is the most dilated part of the alimentary canal, serving for the solution and reduction of food, which constitutes the process of chymification or stomachial digestion. It is situated in the left hypochondriac and epigastric regions. It is placed immediately behind the anterior wall of the abdomen, above the transverse colon, below the liver and diaphragm. It varies considerable in size in different persons, but also according to its state of distension. When moderately filled it measures about 12 inches transversely and its vertical diameter is about four inches. On the upper left portion it is connected with the gullet and on the right or minor portion it forms a junction, through the pyloric orifice, usually called the pit of the stomach, with the small intestines.

The *small intestine* is that part of the alimentary canal in which the chyme is mixed with the bile, the pancreatic juice and the intestinal fluids and the separation of the nutritive principle of the food, the chyle, is thus effected, constituting chylification.

The small intestine is a convoluted tube about twenty feet in length, and gradually diminishes in size from its commencement to its termination. The small intestine is divided into three portions, the *duodenum*, the *jejunum*, and the *ilium*.

The *duodenum* has received its name from being about equal in length to the breadth of twelve fingers (8 to 10 inches). It is the shortest, widest and most fixed part of the small intestine. In it

terminates the common duct, which brings to the intestine the bile and pancreatic juice, so needful in digestion.

The *jejunum* (empty) so called from being usually found empty after death, includes the upper two-fifths of the rest of the small intestine. It commences where the duodenum ceases and terminates in the ilium.

The *ilium* (twist) so called from its numerous coils or convolutions includes the remaining three fifths of the small intestine.

Villi, which are very minute, highly vascular processes projecting from the mucous membrane and gives to its internal surface a sort of velvety appearance. The villi are largest and most numerous in the duodenum and jejunum and become fewer and smaller in the ilium. It has been estimated that throughout the small intestine are about four million of these small villi. The essential parts of the villi are the lacteals and blood vessels.

The purpose and office of the villi and blood vessels is the withdrawal from the food as it passes through the alimentary canal of such matter as is fit for blood building substances; namely, the chyle and substances entering the blood direct. These villi are connected through, the chyloferous vessels imbedded in the *mesenteria* with the *thoracic* duct and lymphatic system in general, heretofore minutely described.

The *large intestines* extends from the termination of the ilium to the anus and is about five feet in length. It is largest at the commencement of the *caecum* or blind intestine and gradually diminishes as far as the rectum, when there is a dilation of considerable size just above the anus. The large intestine describes an arch which surrounds the convolutions of the small intestines. The large intestine is divided into the *caecum*, or blind intestine, the *colon* and the *rectum*.

The *caecum* is the large blind pouch or cul-de-sac as the French call, it in which the large intestine commences. Its length is about $2\frac{1}{2}$ inches and its breadth about 3 inches. The *caecum* lies quite free in the abdomen and enjoys considerable amount of movement.

Attached to its lower end in the *appendix vermiformis* a long, narrow worm-shaped tube. It is in this tube, that sometimes grape stones or other seeds are lodged, and are not dissolved. This lodgement is very dangerous.

The lower end of the ilium terminates at the inner and back part of the caecum and forms a valve which prevents any influx from the large intestine into the small one.

After the caecum and ascending in the right side comes the *colon* and when this part of the large intestine reaches the liver it trans-
verses from right to left across the abdomen, crossing about where the *umbilicus* or navel is located. At its termination it descends on the right side of inner abdomen forming the so called *sigmoid flexure* in the shape of a roman S and empties into the *rectum*, the terminal part of the large intestine and through which the excrements leave the body by way of the *anus*.

The *liver* is a glandular organ of large size mainly intended for the secretion of bile. It also affects important changes in certain constituents of the blood in its passage through this gland. It is situated in the right hypochondriac and epigastric regions. It is the largest gland in the human body, and taking up about 1-32 of its weight. The liver consists of two lobes the right, by far the largest, and the left, the proportion being about six to one.

Numerous blood vessels enter and leave the organ.

In structure it is composed of lobules, held together by extreme fine tissues and the ramifications of the *portal vein*.

The *gall bladder* is the reservoir for the bile; it is a pear-shaped sac lodged under the surface of the right lobe of the liver, and extends slightly below the lower portion.

The *liver duct* and *cystic duct* unite and form the *common duct* and through these the bile is conducted into the duodenum.

The *pancreas*, the same as what is known in the animals serving as food, as sweet bread, is a gland which resembles the salivary. It is somewhat flattened and situated transversely in the posterior portion of the abdomen. This gland secretes the pancreatic juice, alkaline in its nature, and which is conducted through the pancreatic duct into the duodenum, usually joining the common duct just prior to its entrance, but sometimes effecting a separate entrance into the small intestine.

The *spleen* is a gland laying back and to the right of the stomach. It varies much in size, even in one person at different stages. It is highly vascular of a bluish red color, soft, of a rather brittle consistency. Its functions are unknown to science. All these organs are inclosed in a thin membrane, the *peritoneum*.

For the location of the digestive organs and their accessories and connections, the reader is referred to the fine engraved plate, which

will show him the wonderful machinery requisite, to transform the food into chyle, and how the latter enters the blood current, becomes purified and serves to rejuvenate the exhausted body.

THE THORAX OR CAVITY OF THE CHEST.

The *Thorax* is a conical frame-work, formed partly of bones and partly of the soft tissues, by which they are connected together.

It is bounded by the ribs, the muscles between the ribs and the backbone; and at its lower portion by a very thin muscle, the *diaphragm*.

The cavity thus formed, contains the *heart*, enclosed in a membranous sack called the *pericardium*; and the *lungs*, invested by the *pleura*.

THE *heart* is a hollow muscular organ of a conical form, placed between the lungs in the cavity of the *pericardium*. The heart is placed behind the lower two-thirds of the breast-bone and projects farther to the left than to the right cavity of the chest in an oblique position. The lungs cover part of the heart and during inspiration, the borders nearly meet behind the *sternum*,

The heart in an adult is about the size of the fist, and weighs from 10 to 12 ounces in the male and from 8 to 10 ounces in the female. The heart continues to increase in weight, also in length, breadth and thickness, up to an advanced period of life, while other parts of the human system have a tendency to decrease, after full maturity.

The heart is divided into four chambers:

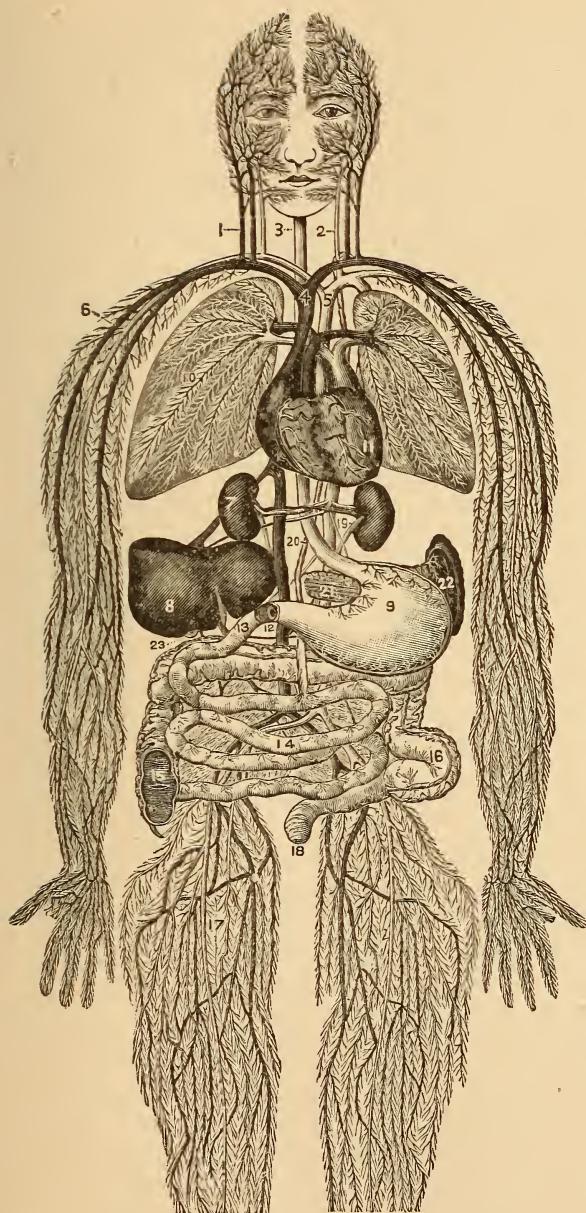
1st. The *right auricle*. Into it opens the *vena cava*, or hollow vein of the body.

2nd. The *right ventricle*. It receives the venous blood through the right auriculo-ventricular valve and forces it through the pulmonary artery into the lungs.

3rd. The *left auricle*, somewhat smaller than the right, receives, by way of the pulmonary veins, the purified blood, back from the lungs, and forces it through the left auriculo—ventricular valve into:

4th. The *left ventricle*, which is longer and more conical in shape, having much thicker walls, than the right side, in proportion of 3 to 1. From it the purified blood is forced, by way of the *aorta* or *great artery* and its numerous branches to all parts of the body.

The manner in which the blood courses through the heart is graphi



1. Jugular Vein.
2. Carotid Artery.
3. Oesophagus or Gullet.
4. Vena Cava.
5. Aorta or Great Artery.
6. Veins and Arteries of Arm.
7. Kidney.
8. Liver.
9. Stomach.
10. Lungs.
11. Heart.
12. Pylorus
13. Duodenum.
14. Other Small Intestines.
15. Caecum or Blind Intestines.
16. Large Intestine.
17. Arteries and Veins of Lower Extremities.
18. Rectum.
19. Ureters.
20. Thoracic Duct.
21. Pancreas.
22. Spleen.
23. Gall Bladder.

cally shown on the plate of Blood Formation and Circulation, the directions being indicated by arrows.

ORGANS OF VOICE AND RESPIRATION.

The *larynx* is the organ of voice and is situated at the upper part of the air passage between the windpipe and root of the tongue, at the upper and forepart of the neck. It can be plainly felt, its foremost projection being the Adam's-apple. The *larynx* harbors the vocal cords, which, through the striking of the air, as it comes from the lungs, vibrate, which makes sound, and through the actions of the mouth are moulded into words, song, etc.

The *trachea* or *windpipe* is a continuation downward of the *larynx* and consists of a cartilagenous and membranous cylindrical tube, somewhat flattened posteriorly. It extends downward about $4\frac{1}{2}$ inches, when it divides in a right and left branch. One for each lung. These branches are called *bronchi*.

The right *bronchus* is wider and shorter than the left and measures about one inch in length.

The left *bronchus* is smaller, but longer, measuring about two inches.

Tracheal glands are found in great abundance at the posterior part of the windpipe. The secretion from these glands serves to lubricate the inner surface of the windpipe.

Each lung is invested upon its external surface by an exceedingly delicate serous membrane, the *pleura*, which encloses the organ as far as its root and then reflects upon the inner surface of the thorax.

The *lungs* are the essential organs of respiration; they are two in number, placed in each of the lateral cavities of the chest, separated from each other by the heart. Each lung is divided into two lobes an upper and a lower, by long and deep fissure, which nearly penetrates to the root. In the right lung the upper lobe is partially divided by a second and shorter fissure, thus marking off a small triangular portion, the middle lobe.

The right lung is the heavier, it is broader than the left, owing to the inclination of the heart to the left side.

In structure it is spongy and elastic, made up of numerous air-cells, on the internal coats of which the capillaries of the pulmonary artery and vein are formed, and it is here that the venous blood gives

of its carbonic acid, partakes of oxygen it finds in air and returns the blood by last mentioned bloodvessel to the heart.

THE URINARY ORGANS.

The two *kidneys* are situated in the back of the abdomen, and are for the purpose of separating from the blood certain materials which, when dissolved in a quantity of water, also separated from the blood by the kidneys, constitute the *urine*.

They are situated on the loins, one on each side of the vertebral column, behind the peritoneum and usually surrounded by a mass of fat and tissue.

Sometimes, instead of being fixed in place by this tissue, the kidney is loose and only held by the ureter and the blood-vessels. It is then called floating or wandering kidney.

The *kidney* is bean-shaped in form of a deep red color. It receives the blood from the kidney artery, a branch of the aorta, relieves it of the constituent parts of urine and surplus water, conducts the residue back to the venous system by way of the kidney vein into the lower vena-cava, and eliminates the urine through the ureter, which empties into the bladder from which it is discharged through the male or female urethra and thus eliminated from the body.

MALE GENERATIVE ORGANS.

The *prostrate gland* is a pale, firm, glandular body, which surrounds the neck of the bladder and commencement of the *urethra*, In shape and size it resembles a chestnut. This gland is perforated by the urethra and common seminal ducts.

Cowpers glands are two small rounded bodies, of a yellow color, about the size of peas, placed beneath the forepart of the membranous portion of the urethra, between two layers of deep fascia. Their excretory ducts open into the bulbous portion of the urethra. Their existence is said to be constant, but they gradually decrease in size as age advances.

The *penis* is the organ of copulation and contains in its interior the larger portion of the urethra. It consists of a root, body and extremity. The penis is composed of a mass of erectile fibres, possessing great elasticity, all being covered by a loose skin, which can be removed from the extremity, thus laying bare the mucous membrane of the gland, where a number of sebaceous glands are situated secreting a caseine mass, and becomes easily decomposed. It emits a peculiar

odor. The frequent cold bathing of these parts cannot be too strongly recommended.

The *testes* are two small glandular organs, which secrete the semen; they are situated in the scrotum, being suspended by the spermatic cords.

The *scrotum* is a skinny pouch, which contains the testes and part of the spermatic cord, it is divided into two lateral halves.

The *seminal vesicles* are two lobulated membranous pouches, placed between the base of the bladder and the rectum, serving as reservoirs for the semen, and secreting a fluid to be added to the secretion of the testicles, by ducts entering through the prostrate gland into the urethra.

The *semen* is a thick, whitish fluid having a peculiar odor. It consists of a fluid, the semen liquor, and solid particles, the semen granules and spermatozoa. The semen liquor is transparent, colorless and of an albuminous composition, containing particles of epithelium, with oil globules and granular matter floating in it, besides the above mentioned solid elements.

The seminal granules are round finely—granular corpuscles, measuring 1-4000 inches in diameter.

The spermatozoa, or spermatic filament, are the essential agents in producing fecundation or impregnation. They consist of a flattened oval head, of a rod shaped middle piece and a long slender tail. The movements of these bodies are remarkable and consist of a lashing of the tail.

FEMALE GENERATIVE ORGANS.

The external female organs of generation, are the *Mons Veneris*, or that fatty collection, which in grown persons is covered by hair. The *large and small lips*, which are two pairs of longitudinal folds, extending down from the Mons Veneris.

The *clitoris* is an erectile structure analogous to the penis in males. A little below this is the orifice of the urethra, through which the urine is discharged. Below this orifice is the opening of the *vagina*, an elliptical aperture, more or less closed in the virgin, by a membranous fold.

The *hymen*, which is stretched across the lower part of the orifice of the vagina. Sometimes this hymen forms a complete curtain over the orifice of the vagina and occasionally it is in the shape of a circular arrangement, perforated in the centre by a round opening. Then

again it is found in the form of a fringe, and frequently it is entirely absent. It may even continue to exist after copulation. In consequence of these facts, the hymen can not be considered as a test of virginity.

The *vagina* lies back of the bladder and in front of the rectum, and is a membranous canal extending to the uterus or womb. At the commencement it is considerably constricted widening out towards the womb.

The *uterus* or *womb* is the organ of gestation, receiving the fecundated ovum in its cavity, retaining and supporting it during the development of the foetus and becoming the principal agent in its expulsion at the time of childbirth.

The *ovaries* are analogous to the testes in the male, and are situated on each side of the womb.

The *oviducts* convey the ova (egg) from the ovaries to the cavities of the womb. These tubes quite frequently become the seat of female troubles, such as inflammation, followed by local dropsy or accumulations of pus, of blood, etc. However, easily remedied by the surgeon.

In the internal ovaries small round transparent vessels are found, containing the egg.

The formation of these vessels containing ova continue uninterruptedly from infancy to the end of the fruitful period of woman's life. Before puberty the ovaries are small and their ova being incapable of impregnation. At puberty these organs enlarge and their ova are capable of fecundation.

The small vessels containing the egg, after gradually approaching the surface of the ovary, burst, the egg and fluid contents are liberated and escape on the exterior of the ovary, passing then into the oviducts, and into the womb and if at this period the union of the sexes takes place, the ovum or egg may be impregnated.

Numerous ligaments surround the womb and ovaries and hold these organs in place.

The *mammary glands* or breasts are accessory to the generative system and secrete the milk. They exist in the male as well as in the female, but in the former only in a rudimentary state. Frequently in the female these glands are the seat of tumors. Before puberty they are of small size but enlarge as the generative organ becomes more completely developed. They increase during pregnancy, and especially after delivery.

The fluid upon which the human as well as all animal bodies subsist, is the blood, which, Webster describes as follows: "The fluid which circulates in the principal vascular system (veins, arteries capillaries) of animals, carrying nourishment to all parts of the body, and bringing away waste products to be excreted."

The blood is a thickish, opaque fluid, of a bright red or scarlet color, when it flows from the arteries, of a dark red or purple color when it flows from the veins. It is sticky and has a somewhat clammy feeling; it is salt to taste and has a peculiar faint odor. Its temperature is generally about 100° Fahrenheit, but varying slightly in different parts of the body. Blood consists principally of two different constituents, namely, a nearly colorless transparent, alkaline fluid, the *plasma* and of distinct little bodies, called *corpuscles*, swimming in the plasma. The corpuscles form about 40% and the plasma about 60%, of the entire mass.

The quantity of blood in the healthy human body is about one-eighth part of its weight.

THE FUNCTION OF NUTRITION.

HAVING briefly considered the different organs composing the Human Body, which are destined to accomplish the acts of life, and are called *functions*.

These functions are divided into two distinct classes, namely,

1st. The *functions of nutrition*, the purpose of which is to provide for the preservation and increase of the human body.

2d. The *functions of relation*, which place man in relation with the beings around him.

To the first are assigned the apparatus of digestion, circulation, and respiration; to the latter the apparatus of locomotion, the nervous system and the organs of sense.

FUNCTION OF NUTRITION.

1. *Digestion*. Digestion is a function which causes the alimentary substances introduced into the digestive apparatus to undergo different modifications, having for their object the transformation of those substances into two parts; the one nutritive, the *chyle*, which renovates the blood and reconstitutes our organs; the other, non-assimilable, the *excrements* or semi-solid residue, which is cast off from the system.

Digestion comprises a series of successive acts which are:

1. The prehension of food.
2. Mastication.
3. Insalivation.
4. Deglutition.
5. Stomachial digestion, or chymification.
6. Intestinal digestion, or chylification.
7. Digestion in the large intestine, and defaecation.

The first act is performed by man, by his hands, in carrying the food to his mouth.

Mastication is performed by the teeth alone and in their absence, or artificial teeth, the gums try it very hard, but usually make a bad job of it. Insufficient mastication is a frequent cause of indigestion in persons who are without teeth, or in those who eat too fast.

Insalivation. This stage of digestion is accomplished, like the preceding, in the mouth. Its function consists in soaking and covering the food, bruised by the teeth, with a colorless and ropy liquid, the saliva. This liquid is secreted in a great measure by three pairs of glands heretofore described. These are the glands, which, at the sight or recollection of a delicate dish, make, as it is said, "the mouth water."

The saliva has two uses, one mechanical and the other chemical. The first has for its object to assist the mastication and deglutition of food, and the second, under the influence of a peculiar ferment, called *salivary diastase*, transforms starchy food into a saccharine and soluble substance, called *glucose*.

The sweet taste acquired by a piece of bread chewed for a certain time in the mouth is due to this chemical reaction and not to imagination.

Deglutition or *swallowing*. This period of digestion comprises the different mechanical actions which occur in making the food pass from the mouth into the stomach, which passage is affected in the following manner: The food sufficiently divided by the teeth, has been collected into small masses; the tongue is hollowed into a gutter like form, is elevated from the point to the base, supported on the palatine vault, and it directs these small masses towards the opening of the gullet over which they pass. At the same time the pharynx is elevated and comes in front of the mass of food, sizes them, and incloses them in the gullet, where the muscular contraction of this tube, together with the force of weight, carry the food down as far as the stomach.

There is a mechanism which prevents alimentary substances from penetrating into the windpipe. In fact the larynx applies its lid, the *epiglottis*, under the base of the tongue and thus closes the upper orifice of the respiratory tube. If this membranous valve, the *epiglottis*, remains raised in consequence of an unreasonable fit of laughter, or an ill managed inspiration, alimentary fragments are introduced into the respiration passages and excite paroxysms of suffocation, which may cause death. It is said that a grape stone caused

the death of Anacreon, a convivial and jolly Greek poet, by penetrating the larynx, while he was laughing.

Chymification or stomachial digestion. The alimentary mass enters the stomach by the lower orifice of the gullet, and there it remains until it is transformed into a rose colored and greyish paste, the *chyme*.

This transformation is effected under the influence of a liquid, secreted by the glands contained in the walls of the stomach, namely, the *gastric juice*, which contains an organic ferment, *pepsine*, endowed with the property of changing azotized foods, such as fibrine, albumen, etc., etc., into a soluble and assimilable substance, *albuminose* or *peptone*.

The stomachial digestion being completed, the chymous paste is inclosed in the small intestine by the pylorus, a conical orifice, which establishes the communication between the stomach and the intestinal canal. The pylorus corresponds to the part of the abdomen, commonly called the *pit of the stomach*, and it is in this region that we most frequently ascertain the presence of a tumor in the case of persons suffering from cancer of the stomach. In such persons digestion is slow and sometimes impossible, in consequence of the more or less complete obstruction of the pylorus.

The faulty position of children who rest their chest on the edges of the table at school, and the more or less continued pressure, exercised in certain callings, on the epigastric region produce disturbances in the functions of digestion and may at length induce lesions of the stomach of a serious nature. Tailors and shoemakers, for instance, being obliged to have the trunk always bent forward, are liable to painful forms of indigestion.

It is difficult to fix exactly the period occupied by the stomachial digestion, for the time is proportionate to the nature of the alimentary substances, to the degree of energy of the contractions of the stomach, and to the activity of the secretion of the gastric juice. Nevertheless, it is estimated that its duration is three hours.

Instead of passing into the small intestine, it may happen that the alimentary matters take a retrograde course, and are thrown out of the system, as is observed in vomiting.

Intestinal digestion or chylification. The food reduced to the state of chyme, passes through the pylorus, as we have just explained in preceding paragraphs and traverses successively the three portions of the small intestine—duodenum, the jejunum, and the ileum. The alimen-

tary mass receives in the duodenum, through the common duct, the *bile* coming from the liver and the *pancreatic juice* from the pancreas.

These two liquids are destined to complete the action of the saliva on the starchy food, and that of the gastric juice on the azotized food; and, thus, they co-operate, together with the *intestinal juice*, which, moreover, is not unconcerned in the proceeding transformations, in dividing the fatty kinds of food into very fine particles, which become capable of being absorbed by the walls of the intestine.

Pancreatic juice is pre-eminently the dissolver of fats, by changing it into an assimilable emulsion, not due to its alkaline reaction, however, but to the organic matter it contains. Fats are not affected by either saliva or gastric juice, and examination shows that they are unchanged in their essential characters so long as they remain in the stomach. In this organ they are, through the warmth of the body, simply liquified. But almost immediately after passing into the intestine, the fatty portion of the food is changed by this pancreatic juice into the emulsion above referred to, and called chyle, which is then ready for absorption. Its second important action is the transformation of starch into glucose. It is more effective in this respect than saliva, being almost instantaneous.

Bile, the secretion of the liver, and as it comes from the gall bladder, is a clear, more or less ropy fluid, of neutral or alkaline reaction, with a faint animal odor. In color it is yellowish bronze green. While bile is largely a matter of excrement, the blood desires to get rid of, it is a fact that it also performs important functions in digestion. It also aids in the neutralization of gases which are created in the intestinal track during digestion. Thus we observe, when our liver does not furnish a sufficient quantity of bile for the condensation of these gases, malodorous winds will escape the anus. This may be surely attributed to an inactive liver. While the researches as to the function of the bile are based more on theories than facts, it may be accepted as evidence that it exercises its influence to exciting the muscular action of the intestine, and thus serving as a stimulus to its movement. That bile is a necessary adjunct to digestion is well known and borne out by facts, but in the manner it performs these functions is somewhat enveloped in obscurity.

The small intestine also furnishes juices, acting as dissolving agents of the alimentary substances.

The total length of the small intestine varies in different classes of

animals. It is dependent on their mode of alimentation. In the carnivora or exclusive meat eating animal, the length is nearly three times that of the body; in the herbivora, or vegetable eating animal, it is more than ten times greater than the length of the animal. The intestine of the sheep is twenty-seven times the length of the body.

As to man, who in his quality of omnivorous being holds a middle rank between the others just mentioned, the length of his digestive tube is five or six or sometimes seven times that of his height.

The most striking example of the relation existing between the digestive tube and the nature of the food taken is certainly that, which is furnished us by the frog. In fact, in the foetal or tadpole state, this animal feeds only on aquatic plants, and its intestine measure ten times the length of its body, but in the adult state, when it eats flesh and principally insects, its intestine is only twice as long as the body.

From these facts of comparative anatomy, it may be concluded that vegetable matter takes a longer time to digest than animal substances.

It would be interesting to inquire whether the intestine of the inhabitants of hot countries, who live chiefly on vegetables, is longer than that of the inhabitants of cold climates, who consume largely the fat and the flesh of animals.

The progress of the alimentary matters along the numerous convolutions of the small intestines is assisted by the contraction of the muscular fibers of this tubes, and, on the other hand, it is retarded by the numerous folds, called "*valvulae convenientes*," which thus increase the extent of the intestinal mucous membrane; and thereby multiply the absorbing surfaces. These mucous folds are bristled with an incalculable number of little projections, called intestinal *villi*, presiding over the phenomena of *absorption*, which is the object of digestion.

These little organs, which are true animal roots, receive in their interior the minute extremities of ten chyliiferous vessels, and those of the ramifications of the portal vein, the office of which is to draw up by imbibation, and not by suction, the alimentary juices or chyle, formed by the process of digestion.

These chyliiferous vessels absorb all the elements of the chyle, they convey them into the thoracic duct and this duct pours this blood building mass into the circulating blood current at the point of union

of the internal jugular vein and under shoulder vein of the left side.

The tributaries of the *portal vein*, located in the stomach and intestine, take up the elements which enter into the constitution of the chyle, with the exception of the fatty matters; they conduct these elements into the liver, through which they pass, and then they penetrate into the inferior vena cava, by the liver veins. It is therefore through the medium of the venous system, that the chyle passes into the general circulation.

Digestion in the large intestine. In the passage across the large intestine the remainder of the alimentary matter still contain a certain quantity of chyle, which is given up for asorption, and then these matters assume a certain consistency, and acquire a smell, which is the stronger in proportion as the food is more azotized. Thus the excrements of the vegetable eating class emits a less disagreeable odor, than those whose diet consists mostly of animal food. The absorbing power of the large intestine is utilized in the administration of nutritious and medicinal injections.

Urination. The urine is to the nutritive liquors, what the excrements are to the solid aliments. The liquids unsuited for nutrition then are eliminated from the body in great part by the kidneys. These organs are formed of a certain number of filters, which give passage to all the impurities contained in the blood, and thus the urine is formed. The urine is a colored fluid containing 93% water and 2% of azotized principle, *urea*, and 5% of other organic matter and salts.

From the kidneys this liquid flows through the ureters delivering it into the bladder to be externally discharged by the urethra.

An adult excretes on the average about three pints of urine each day. During the summer, or after profuse sweating, the urine diminishes in quantity. It sometimes deposits, in its course along the urinary passages, concretions which constitute, according to their dimensions, *sand*, *gravel* and *stone*. The passages of these concretions in the interior of the ureter causes severe pain, and which are the more acute as the volume of these foreign bodies is larger.

The mechanism is analogous to that which gives rise to hepatic colic, at the time of the passage of the gall stones into the interior of the ducts leading towards the intestine.

Pure water, swallowed in large quantity, has the effect of dissolv-

ing these lime like concretions and preventing their agglomeration into larger bodies.

We may also find accidentally in the urine, blood, sugar, bile, albumen, mucous and pus arising from inflammation of the urinary passages.

The smell of urine, slightly ammoniacal in the normal state, is more powerfully so in different morbid conditions; it is also modified by certain essences, which select the kidneys as organs of elimination, and among the number we may mention asparagus, which gives the urine a disagreeable smell, which vinegar has the property of diminishing without removing entirely.

Circulation. The circulation comprises the transmission of the blood from the respiratory apparatus to all the organs of the body, and the return of the blood from these organs to the same apparatus.

The circulating apparatus destined to perform this office is composed of an organ of propulsion, the *heart*, and numerous ramified channels, namely, the arteries, the veins and the capillaries, heretofore minutely described. It might be interesting for some of our readers, to state that the heart is insensible, as Harvey (the renowned doctor who first drew attention to the fact that the blood circulates in our bodies,) demonstrated before Charles I., of England, by making that monarch touch the heart of Lord Montgomery's son, which had been laid bare by a wound of the sternum. The pain which is often referred, to the heart, is most commonly produced by simple neuralgia of the thoracic wall.

The right heart is destined to convey the dark or venous blood and the left heart presides over the circulation of the red or arterial blood.

The arteries undergo distensions at every contraction of the heart, but by their elasticity they return to their former condition as soon as the heart's impulse terminates. This movement of dilation and elevation of the arteries constitutes the pulse, analogous with the beating of the heart.

When persons are growing old the walls of the arteries become fatty and lose the property of contraction, and they allow themselves to be gradually distended by the impulse of the blood, and may form at the most altered parts, dilations which are called aneurisms.

If this alteration exists in vessels of weak calibre, like those of the brain, there is, generally, produced rupture of the walls, which give rise to hemorrhage or cerebral apoplexy.

The walls of the veins not being elastic are unable to return to their normal condition, when they have been too long distended and they present in such a case permanent dilations called varices, or varicose veins. The varices of the veins of the rectum have received the name of haemorrhoids or piles.

That the course of the blood in the veins is not felt, is caused by the retarding influences of the capillaries, while the blood passes through them.

Pulse. The average frequency of the pulse in man is, for the adult, 70 per minute. This rate may be accelerated by muscular exertion. Even the variations of muscular efforts, between standing, sitting and recumbent postures will make a difference in the frequency of the pulse of from 8 to 10 beats per minute.

The pulse of a foetus before birth is about 140, and that of the newly born infant about 130 during the first, second and third years it falls to 100, by the fifteenth to 80, and is reduced to the adult standard by the 21st year. Pulse somewhat relaxes in age. A slow pulse is usually a strong one and a rapid pulse comparatively feeble. An excessive rapidity of the pulse is an indication of great danger and in the adult, a continual rate of 160 per minute is almost invariably a fatal symptom.

Mechanism of Circulation. The venous blood flowing from all the regions of the body, arrives by the two venae cavae into the right auricle of the heart and thence into the corresponding ventricle, which propels it into the pulmonary artery, the ramifications of which are distributed in the substance of the lungs. The dark venous blood received by the lungs becomes arterial, or red, by the contact with air, and returns, thus modified, by the pulmonary veins into the left auricle, whence it passes into the ventricle of the same side. The contractions of the left ventricle propel the current of the blood into the Aorta, and thence into the whole of the arterial system as far as the capillaries, where the blood leaves its nutritive materials in the tissues of the body. From the capillaries it returns at last to the heart by the veins, which we have selected as the point of departure of this circular journey. The heart may, therefore, be justly compared to a forcing-pump, which feeds itself.

The blood takes only about 30 seconds to make the entire round of the circulation, and consequently in twenty-four hours, a blood corpuscle traverses 2,880 times the double circulatory circle, which is equal to a speed of about seventeen miles an hour.

The more active the circulation is in any organ, the greater tendency there is to the development of that organ. Hence it happens, that the right arm is stronger than the left, though not so in left-handed persons, and that the lower limbs of dancers are more developed than the upper ones.

The facility with which the emotions of the mind act upon the heart lead us to attribute to this organ all the sentiments we feel. Thus we find in all languages, sayings and proverbs, which make the heart the source of our passions; hence the expressions, a heartless man, or a hard heart, a good heart, a brave and noble heart, and a broken heart, to characterize selfishness, goodness, courage, generosity and sorrow. In the same sense, one hears the exclamation: "All great thoughts come from the heart."

Respiration. The respiratory function has for its object the transformation of the dark venous blood into red arterial blood. The apparatus performing this duty has been described before under the organs of Voice and Respiration. The seat being in the chest and neck and it remains only to describe its physical and chemical phenomena.

Animal Heat. In accomplishing its vital functions the arterial blood loses its nutritive qualities, and is converted into venous blood. It is by respiration that this venous blood is revived and transformed into arterial blood, after having got rid of the carbonic acid it contains and having been saturated with the oxygen gas of the air. This interchange of the two gases is affected in the lung vessels, or aircells, and constitutes the phenomenon of hematosiis, or arterialization of blood in the lungs, an act exclusively physical and conformable to the laws of the absorption of gases by liquids.

The respiration of plants is altogether opposite to that of man, since it consists in the absorption of carbonic acid and the exhalation of oxygen. There ensues from this circumstance a kind of salutary antagonism between the two principal kingdoms of Nature, the animal and the vegetable.

The mechanism of respiration comprises two periods, *inspiration* and *expiration*. Life begins with the first and ends with the second. These respiratory movements are effected, on the one hand, by the ascent and depression of the ribs, and, on the other, by the lowering and raising of the diaphragm, which, by pushing forward the viscera

of the abdomen, depresses the walls of this cavity or causes them to project.

In the child the respiratory movements are manifested, by the elevation of the belly, and this is what is usually called abdominal respiration. In the adult man we notice the elevation of the lower ribs and that of the abdominal walls, but in woman, in breathing, moves only the upper ribs. This kind of respiration is peculiar to the female sex, and is not caused by the use of stays.

The movements of respiration take place in a pretty regular manner, and about twenty may be counted in a minute.

At each inspiration about forty cubic inches of air are introduced into the lungs, and this is pretty nearly the seventh of the whole quantity which these organs can contain.

Thus in one minute the lungs receive about 12 quarts of air, in an hour 720 quarts, and in a day about 4,320 gallons. There is only about one-fourth part of the oxygen retained, while the amount of carbonic acid exhaled is rather smaller than the volume of oxygen absorbed.

At each expiration the lung does not get rid of all the air it contains; the latter is only gradually removed. Hence comes the establishment of quarantines, applied to vessels, returning from countries, where contagious diseases prevail.

The carbonic acid exhaled by animal respiration tends to vitiate the air, and when the atmosphere contains more than three-tenths of this gas, respiration is altogether impeded. It may even be affirmed that the air is unhealthy before this limit is reached.

The absorbed oxygen presides over some of the chemical reactions, which occur in the economy; and the combined action of which concurs in producing the animal heat.

The temperature of man, taken under the shoulder in all seasons, is 98° Fahrenheit; it has been known to raise to 107°, and even to 113°, which is the extreme limit in disease.

FUNCTIONS OF RELATION.

It is by the functions of relation, that we are placed in relation, with the external world, that we receive thence sensations, and that they execute movements. The organs which concur in these two orders of distinct phenomena form the apparatus of locomotion, and

the apparatus of sensation. The first comprises the bones, the muscles, and the joints; the second has under its domain, the nervous system and the organs of sense.

The body as servant of the soul. Let us for a few moments concentrate our thought upon the master and then consider the functions of the servant

From the anatomical description of the nervous system in this work, we have learned the location of the grey nervous matter, or nerve cells; namely, in the outer stratas of the brain, the internal part of the spinal cord and ganglia of the sympathetic nerves. It is in these nerve cells where we find the seat of our sensibilities, the origin of thought and of movement. It is surely the mingling ground of body and soul, of matter and mind. It is, therefore, not to be wondered at, that if this intricate part of the human body is infringed upon, either by its nutriment or overtaxed, or through extended passiveness becomes corroded, that symptoms manifest themselves, which we see in cases of apoplexy, paralysis, delerium, madness, melancholia, in fact in all our thoughts and actions. The soul of man, during life, exerts its influence only through the body, its abode, and its intimate connection is surely the phenomena which science may try, but not succeed to penetrate. The usefulness of our mental faculties depend solely for their success upon the body, modified and modulated, of course, by its condition; health, sickness, power and weakness, either mentally or bodily.

We can see, hear or feel for ourselves, or we may read or be told by others, that the organs of sense teaches us the doings of the world, as well as the thoughts of other men. Thus we receive impressions in our brain, through our memories they become fixed and in cogitations are at our disposition. After mature deliberation we come to conclusions, which are in due time, and in accordance with our mental resolutions, executed by the different organs for that purpose. Thus we use our legs and feet in walking, running, etc.; our hands in their avocations, and our mouths in moulding the sentiments of others, as well as proclaiming the results of our researches, and our ears to listen to those who are our superiors mentally.

We see our soul through the actions of the body in its daily avocations in ourselves, and others, and the lesson thus learned enables men to rule among themselves and the earth. This is in fulfillment of the Creator's aims.

As a stranger, man comes with his body; yes, even in his body, into the world. The child learns gradually the use of his senses; learns to think, to walk and to speak. Our soul is not of this world, and we are unable to see it with our eyes or hear it with our ears or touch it with our hands, but into its worldly abode and its worldly work shop, we are permitted, through the scientific researches, to observe the mental activity or its reverse.

In order to place the mechanism of the cerebral or brain functions within the reach of minds, which have not been prepared by special studies, the nervous system may be fittingly compared to electric telegraphy.

As in the telegraph, all the dispatches, *the impressions*, arrive at the home office, *the brain*, by myriads of fibrils, *afferent nervous fibres*, which, from all parts of the body, terminate in a common nervous center called *optic layer*, the arrival office of a telegraph system.

From the optic layer proceed numerous *afferent fibres*, which place it in relation with the cortical cellules, the combination of which constitutes the external layer, *the grey matter*, and the active part of the brain. In these cellules the *dispatch* is analyzed and carried by commissural fibres, the *corpus callosum*, into the hemisphere of the opposite side.

After this last test, perhaps a kind of superintendence, the dispatch is carried by different nervous fibres into the striated body of the brain, which might be termed the departure office of the telegraph system, from whence it is sent off to the organs in the form of the will by the motor fibres of the nerves.

The result of the functions of nutrition, as superintended by the apparatus of sensation, leaves us now the consideration of the apparatus of locomotion.

The faculty of moving depends on a general property, namely, *contractility*, which in man resides in the muscles, the whole of which, taken together, constitutes the flesh.

These muscles are attached to the bones, which are connected by joints; as to their structure, location and names the reader is referred to their anatomical description and the illustrations upon the subject.

In the foregoing lines we have learned how closely and intimately body and soul intermingle; how we perceive the doings of the latter by the actions of the former. But still more visible signs exist, when

we consider the inability of the body to conceal thoughts when they become apparent by change of color in his face. The red flushed cheeks of shame; the deadly palor of fright, are signs that our brain sends out dispatches which the body delivers under protest.

The movements in a body are affected through passive apparatus, or the bones constituting the skeleton, and were it not the symbol of death to many, its wonderful mechanism might be studied to advantage. The coverings are the muscles, possessing the property of contraction and relaxation, more or less under the control of the will. So when the brain dictates a movement, word is sent by the nerve fibres to the muscles interested in the action, and thus obedient to the will the muscles either contract, flex, extend, abduct, etc., thus setting the passive apparatus, the bones, aided by the joints into motion.

Having learned the structure of the different organs of the human body and the functions they have to perform, we naturally come to the conclusion, that, if we are born in health, what makes us sick.

Accidents are isolated cases, taking cold or over exertions are oftener the cause, but surely the main source of illness is an unregulated mode of life, bad air and unhealthy food and drink, badly ventilated and damp houses, too much or too little clothing.

What is a cold? The morbid state of the system produced by exposure to cold or dampness. The blood is evenly distributed in the respective blood vessels, and when a part of our anatomy is exposed to a change of temperature, caused either by a lower one or extreme dampness, the vessels through which the blood flows contract somewhat they become chilled and drive the blood from the surface towards the, internal parts, causing there a congestion, occasionally to such an extent that haemorrhages ensue. More frequently the congestions are ameliorated through inflammation of the mucus membranes in the different parts of the body. Thus the blood driven to the glands, secretes the mucus which we throw off, after taking a cold. Cold in the eyes makes them watery and inflamed; in the nose, catarrh; in the mouth, a blistered mucus membrane; in the throat and wind-pipe, catarrh and expectoration of mucus; in the lungs, of congestion of the capillaries, inflammation of same, and the secretion and expectoration of the pus; in the digestive tube, catarrh of stomach and intestines, accompanied by diarrhoea. All colds are more or less accompanied by fever.

How does an unregulated mode of life interfere with our health?

In the human organism a constant change is continually taking place even in the smallest particles; the particles gradually dying and being replaced by new ones, so that every organism bearing all outward signs and appearances of the former whole is after a certain time really composed of new materials, exactly resembling those, which having fulfilled their separate functions, die off, are discharged and replaced by new ones. Now, when this process goes on we enjoy health; *disturbance* of the same gives rise to different sicknesses. The digestive organs play a most important part in this process, whose function it is to form the chyle from the different articles of food taken into the stomach and to carry the same into the blood. Disturbances occurring in the functions of the digestive organs are, therefore, of the greatest importance, as they interfere and render abnormal the nutritive assimilation, causing disturbance to the general health, and laying the foundation to many sicknesses. Therefore, to keep in good health it is of the utmost importance that the digestive organs perform their functions in a regular manner.

One of the most frequent interruptions occurring in the process of digestion is sluggish stool, in which case the contents of the intestines, which in a healthy subject are always expelled with ease, are retained or got rid of with difficulty and in small quantities. This unnatural collection and retention of excrement in the bowels, consisting mostly of decomposed food mixed with gall and mucus, can certainly be retained for long without causing any disturbance to the health; but as a rule a very short time suffices to give rise to all sorts of disagreeable symptoms and soon lays the foundation of serious illnesses, some most difficult to cure and many proving fatal.

The cause of all this lays mostly in partaking of unsuitable food and drink, matters which have shown us by experience as are hard to digest. To make a list of these foods and drinks, would be impossible; then it is a well known fact that one person can eat rich salads, wash them down with vinous or spiritous liquors any time of day or night, digest them, and feel no bad symptoms, while others would become, from such indiscretion, "sick unto death." It shows us that the first party is the possessor of a strong digestive apparatus, and the latter of a weak one.

Eating when stomach is filled and "crowding" this organ will make serious disturbances. The taking of food at unseasonable hours and at irregular intervals has a like effect. To partake of more food than

is requisite for sustenance and too little for the regeneration of the blood, all have a tendency to throw the digestive organ out of order. The sedentary life to which the large mass of mankind is subjected is another cause, inasmuch as it causes constipation and other disturbances of these organs. The symptoms are generally in the disorganization, that the patient gradually becomes aware of an unpleasant sensation, as if the stomach was overcharged or full of wind, combined with a tense feeling in the same region, the appetite declines, the tongue becomes furred and a bitter or sour taste often accompanied by a copious flow of saliva from the mouth, occurs. Other symptoms of disturbed digestion are: Feeling of sickness, sour and rancid eructations, heartburn and troublesome feeling of pressure in the epigastrium.

The patient complains of queer feelings in the head, dizziness and headache, which latter is confined to the forehead. When costiveness continues for a long period, the consequences may become more and more serious; the diaphragm is forced up against the thoracic viscera, causing a feeling of tightness in chest and a greater or less difficulty in breathing.

Disturbances occur in certain abdominal blood-vessels, sluggish circulation sets up, giving rise in the first instances to rushes of blood to the head and chest (which accounts for the difficulty of breathing, palpitations of the heart, with feeling of anxiety, tight feeling across the chest, dizziness, etc., etc.). Through a longer continuance of this evil, the circulation of that wonderful network of bloodvessels, which, coming from the liver and spleen, surrounding the intestine, stomach and pancreas and called the "*portal system of circulation*," stagnates, causing congestion of liver and spleen with enlargement and organic changes; alterations of the gall both in quantity and quality, hemorrhoidal affections, troubled frame of mind, and often apoplexy.

You will ask how is it possible, that all these troubles can come from the disturbances in the digestive organs. We have learned that through the digestive organs, our blood becomes recuperated and in turn builds up again worn out particles of our organism. If the digestive system performs these duties in a regular manner, we need not fear any disturbances, but when disorganized and the lacteals, which absorb throughout the intestinal canal, chyle, the main blood building substances, and this is intermixed with excrementitious matter, which ought to have been eliminated from the system, but can

not owing to these disturbances, then particles are carried into our blood which should not be there and cause, in consequence, disease in its various forms.

We have learned that the urine is to the nutritive liquids what the excrements are to the solid ailments.

All absorbed substances that have become, or are from the start, unfit for the nourishment of the body, must be cast off by the blood, that being the chief centre of nutritive assimilation, if the blood retains these unfit particles, its condition becomes bad and it can not perform the functions it owes the body. The duty of discharging or carrying away the refuse matter from the blood is performed: 1st, by the kidneys, 2d, by the lungs, 3d, by the liver and 4th, by the skin. The ingredients which these organs eliminate are as follows:

The *kidneys*, filter the blood and sequester the urine and its constituent parts and lead this liquid out of the body. If we drink impure water, holding in suspense, or dissolved in it deleterious substances the functions of the kidneys are interfered with. The partaking of too much water overworks the kidneys, and an insufficient quantity has a tendency to prevent the dissolution of the constituent parts of the urine and remains in the blood and body in consequence. Large quantities of alcoholic drink has a tendency to congest the bloodvessels of the kidney and may cause inflammation.

The *lungs*. They eliminate from our blood the carbonic acid, by means of partaking oxygen they find in the air, thus expelling the former. When our respiratory apparatus is interfered with, as explained in preceding lines, by the digestive machinery, and breathing becomes difficult more carbonic acid is retained in the blood, than the body demands, asphyxia in its first stages will result, also fevers and congestions of the lungs are frequent ailments, aroused from the improper discharge of the carbonic acid.

The *liver*. It secretes the bile from the blood. If from an overflow of blood to this gland, it becomes congested, its functions are disabled and the blood retains the bile or gall, which leads to jaundice, and numerous other liver complaints. Further when the liver is incapable of secreting the bile, it has none to furnish to the intestine and the absence of this important digestive fluid, causes numerous troubles in the digestive apparatus.

The *skin* eliminates from the body fatty matters, as well as cools the body through its function of perspiration. Like everything else, its

wonderful machinery is worked by the blood, and when an impure blood is furnished for its functions, the closing of the sweat tubes, and sebaceous glands takes place and the excrements which find egress through this part of the body cannot be cast off and are retained in the blood and thus adding to its impurity.

Thus it is, that, when through disturbances, these different excretory organs become incapacitated to perform their functions, much of the refuse matter remains in the blood, and usually proves to be the germ of troublesome and dangerous diseases, such as skin eruptions, gout, rheumatism, all the numerous affections of the lungs, liver and kidneys, hemorrhoids, open sores, etc., etc.

Houses badly ventilated are very injurious to health. The air we exhale from the lungs is charged with carbonic acid. When this foul air finds no vent, we inhale the same again. Its poverty of oxygen the matter giving the invigorating power to our blood is missing, and the functions cannot be properly fulfilled. Damp houses are equally injurious for the reason that through the existence of moisture, decomposition takes place, causing gases to rise which we inhale to the injury of our well being.

Too much clothing causes artificial perspiration and too little clothing drives the blood towards the internal parts.

Light is life. Every farmer knows, or at least ought to know, that the vegetable kingdom in which he works, furnishes oxygen in day time and uses and absorbs carbonic acid, while during the night the reverse takes place.

The two divisions, animal and vegetable, are closely allied, and even if the change is not as marked in the former, as in the latter, we all know that young children, deprived of the light of the sun, are weaklings throughout life.

The occupation of man and woman must be congenial to their living in order to enjoy health. We all must work, either physical or mental, if we do not wish to violate the old saying, "who does not work must not eat," and is it not true that our daily bread tastes sweeter after a good day's work. The reason for this is that through our exertions, in whatever direction they may be, part of the blood in our bodies has been consumed and must be replenished through healthy food.

If we violate any of the laws of nature in regard to ourselves, we

have to suffer. All the fervent pleas we may offer, that we did not know or thought it would not harm us, are no bar to the consequences. But before we suffer the final, and cross to the unknown, a chance is given us, which may obviate and extend the time for dissolution of body and soul. This lies in the numerous remedies, from the animal, vegetable and mineral kingdoms, which nature has provided and science shows us how to use, in combating the many, many diseases to which our bodies are subjected.

To administer these remedies intelligently requires a knowledge of the human body and its functions, we trust, therefore, that you will study carefully the preceding pages; not alone, for the benefit of yourself, but also for the amelioration of the suffering of your fellow men.

INVESTIGATION AND OBSERVATION OF THE SICK.

IN health the body regulates itself. To be in health means only, not to be aware of the existence of the material body, and to have at our disposition the mental power requisite in our thoughts and actions.

Through heat water forms into stream, through cold into ice. The action of moisture of acids on iron will oxidize same. In our bodies we have, likewise a constant formation and disintegration of its material component parts. Certain laws rule our course of life, birth, physical and mental development, and death. This course of life is not variable, only certain conditions can prolong it. Between life and death are health and disease. Health makes life a source of joy and disease the reverse. We have learned what a healthy body is and now let us likewise acquire a knowledge of the different diseases, their causes, their prevention and treatment.

The Physician. This book does not pretend to give you means to control all diseases the human body is subject to, it would be folly. In fact it would be a crime, if you wait to call in the physician before a disease becomes uncontrollable through the means herein given. But this work will prevent the majority of diseases, if thoroughly studied and the remedies through it, at your disposal are administered. A man who has made a life time study of the science of medicine, has more remedies at hand, than we can possibly put at your disposal in this work and accompaniment.

Therefore we cannot too strongly urge, in cases of obnoxious diseases to call in a physician, and if he, with His will then fails to remedy, your loss will be easier and you will not have the pangs of conscience, that you had not done your duty towards those near and dear to you. And when the physician takes charge of your sick, follow his instructions, without questioning, otherwise his labor would be for naught.

What ails the sick? If you do not know already, learn all you can from preceding pages about the construction and functions of the body. That part, where pain exists is diseased, look then under the diseases of that class and compare carefully the given symptoms. Should then the complaints of your sick and your own observations be the same, you have the key to the situation at your command, act in accordance with the advice given.

Signs of Sickness. We have learned to judge the body when in health. How the same will act and perform the duties of life. If any part of the human organism shows a laxity in the performance of its functions, it is surely a sign of approaching indisposition, disease, or may be death. Act at the first sign, then for the last no remedies exist.

Age and Sex. Have much to do with determining the cause of sickness. So in the young, when growth, and consequent changes, are more rapid, disease is more liable to appear and vanish, than in the mature body. Sex also influences life to such extent, that a complete revolution takes place in the female at the time of puberty. The aged, sometimes through loss of teeth, and other causes, cannot assimilate their food satisfactorily, and the changes being more slow, the apparatus of nutrition needs looking after before it is too late.

The Complaints of the Sick. Watch them carefully, whether they are generally indisposed, with no particular seat or location, or whether their mind is disturbed, look into the cause of such disturbance and try to convince them of their temporary nature. Listen patiently to what your sick have to say, do not make small of their complaint, but gather all facts, discard all fancies and hallucinations, and establish in the sick the confidence, that their troubles are yours also,—make from all this a careful diagnosis and apply the remedies now at your command.

The Constitution. Whether strong or weak. In the former some irregularities are easily remedied by simple means, but in the latter greater care must be exercised and the best we can do for them is a very nourishing diet to make them stronger. Excitability, shows a poor nervous constitution. A bilious constitution requires frequent cleansing of the alimentary canal, and shows itself through constipation, digestive troubles, yellow skin, dark urine wind in abdomen, and coated tongue.

A constitution subject to pulmonary consumption, shows itself in a long thin neck, thin, long growth of body, narrow chest, wing-shaped

projecting shoulder blades, a very white, thin, soft and transparent skin, showing the veins, quick pulse, a hectic flush in cheeks, warm hands after eating, short of breath. Also constant tendency to catarrh in the respiratory organs, pneumonia and haemorrhages of the lungs.

A constitution which shows a tendency to apoplexy is usually marked by a large head. short, thick neck, broad shoulders, heavy trunk, corpulency, red eyes and face.

Habits will sometimes become a second nature to ourselves, and frequently to such extent that they are the causes of numerous diseases. Let us enumerate: Drinking alcoholic and malt beverages to excess, smoking, living on an exclusive diet without variation. Further a poor man becomes rich, changes his mode of life, by eating and drinking only the richest foods, his constitution becomes undermined, and his foundation is weakened if not entirely destroyed by gout and other kindred diseases.

Family Peculiarities of the sick, give us much information, as through it we may trace hereditary diseases. A plain bronchial catarrh in a person whose family is subject to consumption, is a far more aggravated disease, than in a person, where the consumption does not run in the family.

The law of heredity is too well established and known to require any elaboration, for we see in persons around us and with whom we are acquainted, such unmistakable signs of its existence. Weak chested parents will transfer this faulty structure to their offspring. Fathers, who have not had the warnings of their parents, and having committed an indiscreet act with a diseased woman in their "wild-oats" time, and, thereby, contracted a loathsome disease, and which is too hard rooted in them, notwithstanding the ulterior cure, can transmit to their offspring scrofulous troubles and general disability. Many male troubles, and for that matter female diseases of the generative organs, prevent conception, others are causes of still birth, but lo, too often the little child, resting in the womb, partakes of the germ of disease, while part of the mother, and arrives in this world with a frail body, in which its soul finds a poor mansion.

The cause of sickness. Only through experience and observation, and by the use of a clear mental conception can we prove the causes. Then by obviating the causes we can in future forestall sickness and by ameliorating the consequent condition we can cure the disease.

Inflammation. Origin and course. If we prick ourselves with a pin or other sharp instrument, are bitten by insects, come in contact with acids, burn ourselves by contact with hot objects, the blood-vessels become enlarged, first the arteries, then the capillaries, and lastly the veins. The blood flows quickly into the widened parts, but after a short space of time this flow slackens. The blood corpuscles are pushed together, like people before a house where a mishap has taken place. The little globules assume a wave-like motion, and in this part of the anatomy the circulation of the blood is upset. Then the blood secretes an albuminous, coagulable mass, which moistens the damaged cells, which leads to suppuration. The signs of inflammation in all parts of our bodies are unmistakable, for we feel them through the nerves, distributed to all parts of the body.

Where the usual signs of inflammation manifest themselves, either through red appearance, heat, swelling, pain, as other signs in the interference of the cells or their obliteration is the seat of the inflammation. Sharp boundaries do not exist, however, the course may be towards the internal parts or may spread on the surface, while we are cogitating, how the inflammation occurred and from what cause.

If the inflammation comes to suppuration and deposits pus it should be carefully removed and the wound be kept strictly clean. If the pus does not leave the body it will act as a seed and spread the inflammation to other and adjacent parts.

To allow inflammatory sores to spread has very often disagreeable and sometimes fatal consequences, it spreads with rapidity and shows itself in numerous types. They will mostly show in fatty parts, bone projections, muscular enlargements and cancers. If poultices will not do the work to bring them to an early suppuration the aid of the surgeon's knife has to be resorted to. Even a guarantee for a complete cure in these cases can not be given, but a prolongation of life can be counted upon.

In case inflammatory swelling occurs to stomach, womb, breast, tongue and lips, these parts should receive the utmost care and attention, so that relief from disease is had as early as possible.

The process of the formation of inflammatory swelling is rather a gradual one in the beginning and perhaps not even noticed at first. We naturally ask, when does the period of danger commence? Whenever a part of the body, becomes through this ailment incapacitated and cannot fulfill its functions, and causes us uncomfortable feeling—

yes even pain, then it is sick and aid must be at hand. For in the first stages we can counteract the disease easier, than at a period, when it is of greater scope. Always remember that we cause our bodies, undesirable feeling and even sickness by our own acts, as well as by our neglect to act at a proper time.

Inside of certain boundaries our bodies regulate themselves, but you may take it for granted, that this boundary is as small as the paradise upon earth. The body needs always the aid of the soul and mental faculties to be kept in good health.

When any part of the body, either in mixture or build, becomes disorganized, it has always a direct cause for such. In order to become acquainted with the causes, let us investigate these, by observation on such parts as we can see. Slight mechanical causes, such as pressure, fricture and contact with harder substances are usually relieved by the elasticity of the skin. Still greater is the protection of hair and nails. Frequent friction of the skin tissues will have a tendency of hardening same as the thick skin in the hand of a laborer, or the corns and bunions on feet of people, who insist that a number "6" shoe will fit their number "9" foot. Stronger mechanical power leads to rupture of the blood-vessels, bruising of muscles and the periosteum or bone skin, sprains of joints and fracture of bones. All these may occur from this cause, leading to inflammation without rupturing the skin.

Strong heat and cold, as well as quick changes between them, are well known thermal causes for inflammation.

Strong concussions, for instance, of artillery and blasting may cause rupture of the tympanum or drumskin of the ear and its inflammation.

Too strong light will cause inflammation of the eyes.

Chemical causes of inflammation are acids coming in contacts with the internal or external tissues, Lye and unslacked lime have similar properties.

The bite of the poisonous snake cause inflammation hard to control.

A great many internal diseases are caused by inflammation from some cause, mostly by the inhalation of the germ of the particular ailment, but also from thermal causes.

Bronchitis, or inflammation of the air passages, Catarrh of the nose or inflammation of the mucus membrane, Diphtheritis or inflammation of the tonsils. Inflammation of the mucus membrane of the

digestive tubes, such as gastritis, catarrh of stomach and intestine, flux, typhus and cholera. Of the Generative organs may be mentioned Childbed fever.

The nerves give life to the tissues and the blood is the means of life. They become excited when they move the tissues to activity. When our will wants work from our muscles the nerves deliver the message and the sympathetic nerves take care that sufficient of the nutrient blood is supplied to the active parts. When we are very cold or hot, we notice that our nerves are occupied in preventing a too certain change and also appeal to our mental faculty for assistance. We better respond, if not, we pay for our carelessness and ignorance usually, through the painful incidents of the sick bed, yes, often worse, death.

Many professional men, scientists, and people in general who work with their brain, have been unable to take along the honor and fruit of their labor into the insane asylum. Their mental exertions strained their brain and they misjudged its capacity. Never thinking that this part of their anatomy needed food and rest proportionate to the work asked from this organ. What are the consequences? Inflammation and softening of the brain, kills first his mental faculties and incapacitates the brain from reigning over the body till such time, the latter is also useless, when death becomes a welcome visitor.

The finger muscles of the violin player and the muscles of the larynx in a singer are often put to terrible strains, even to such extent that they refuse the bidding of the soul. Thus a God given talent is ruined by a misguided will.

Thus we can strain most every part of our bodies, the consequences of which show their first symptoms in inflammation.

Change in nutriment and consequent condition are not bounded and calculable solely by the increase and decrease of the body, but single tissues are to be considered, of which the body is composed. The difference, whether these single tissues need albuminous, fatty or glucose matter, or any of the salt, water, oxygen, or if any of these substances are accumulating, shows very plainly in the beginning of the downgrade in sickness. Hunger has different consequences as thirst or the want of oxygen, not only when the patient feels it, but also when the careful nurse observes. The organs, desirous of being appeased in hunger, thirst or respiration, should be satisfied moderately, for in their diseased condition, they cannot digest them to the full extent as in health.

Starvation. If the body does not receive any nutriment it will continue to exist from 8 to 12 days, and this may be extended by the administration of water even to 40 days. The daily loss of muscular tissue and in weight of body is considerable at the beginning, but as a diseased body is liable to take part in little activities, this loss relaxes. Children suffer an earlier death by starvation than grown people, because the changes taking place in their organism are of a livelier nature. The substances which vanish from the body are first water, then fat.

Temperature of the body can lower from $98\frac{1}{2}^{\circ}$ in health and rise in extreme cases to 109° or even 110° which, however, usually ends in death. The variations of the temperature amount in some diseases to 20° , but such extreme cases usually brood no good for the patient.

The lowering of the temperature is caused by the want of nutriment and oxygen, but also by changes in the circulation of the blood, and by inactivity of the organs. It is for this reason that aged people suffer more from cold than the younger and active ones and that we make use of bed covering during sleep, where all organs rest, except the heart, lungs and kidneys.

The use of bodily temperature is not only caused by activity and contact with heats, but also through disharmonization of the conditions of life, such as the changes taking place in the organism. If this goes on regularly we feel well, but if the changes in our body becomes disorganized, a quick change of temperature takes place and if towards the upper scale of the thermometer, will constitute *fever*.

It is from the localization where the origin in temperature causes changes that we name the different fevers, such as gastric, (stomach) brain, rheumatic, gall, hectic, etc., and owing to the regular recurring fever we have the disagreeable "intermittent."

Fever is a sign of over heating of the body and usually the accompanying symptoms of numerous maladies, and through which, according to its strength, duration and change, sickness can be more or less controlled.

Origin of fever. It is the over heating of any of the tissues, without being able to give proper ventilation of the same and which may lead to inflammation.

The surest signs of fever is the rising of the temperature of the body. The rapid exhalation of carbonic acid, and the increase in urine with sediment of a dark nature in bottom of vessel are also

signs. After the heat finds vent through the skin, perspiration sets in, and with it is lost quantities of moisture and salts, all tending to weaken the whole system. All the organs requisite in the preservation of the body are in feverish activity to make up for the loss, and so it comes that the portions necessary for our mental faculties are badly neglected and delirious moments may ensue after a fever, or during its period. Strong feelings of illness troubles the mind of the fever patient and the proper place for him is the bed; sharp light, loud and continued conversation, bad smells, contact with cold substances are painful to him. The patient is not capable to formulate a thought. The nerves, through the great strain they have undergone, are very sensitive. He has flickering before his eyes and a queer noise in his ears. His head is in pain and ideas run races through his sick brain, which his mental faculties find laborious to control. Towards evening it is frequent that delirium sets in and it is of frequent occurrence that patients jump out of the bed and sometimes out of the window, when not carefully guarded. In such cases ice poultices or cold wet cloth on the head will tranquilize the patient and convince us then that the seat of fever is in the brain, where these mental disturbances had their origin. When the fever becomes so strong that the temperature rises in the neighborhood of 109° the contents of the tissues become disorganized and in many of the organs a fatty degeneration takes place. Blood will coagulate at 110° in the veins.

The patient has no appetite, in many cases, an aversion against the most tempting food; his digestive organs are passive, tongue and lips are dry, the former usually coated with a whitish yellow mass; the inactivity of the intestine leads to constipation and an unquenchable thirst troubles the patient, notwithstanding he takes large portions of drink.

Fever leaves temporary tracks in a patient's appearance and strength. Their recuperation requires careful nursing and a gradual tax of the organs is only permissible.

The acts of *walking* and *sleeping* are two conditions of the body, which in its disease must be carefully observed. The life during the day belongs to the mental and that during night to the physical part of the human organism and on its regularity depend greatly these functions. These conditions are greatly changed through sickness, however; then we find in certain diseases "insomnia," or unable to sleep and in others where the body is in a comatose condition or state,

resembling a drowsiness from which the patient has had to awaken. These two conditions are pretty sure signs of illness, in the first it shows a great irritability of nerves, or that, owing to the strain the nerves have undergone, their excitement cannot be tranquilized by proffered sleep. Comatose condition shows something in the nature of a collapse of the nervous system, an exhaustion, and its degree of danger is measured by the amount of means it takes to bring the patient out of lethargy.

The sleep needs careful observance on part of the nurse; whether troubled by dreams, or whether acts take place in the patient, such as drawing of faces, gesticulating, speaking and movement of the body. In a state of health these symptoms will not show themselves, and hence, are sure signs that the mental machinery of the body is at work, and that the patient does not receive the rest and refreshment his ill body so badly needs.

Noise in the room or neighborhood, penetration of natural or artificial light, uncomfortable beds, irregular and badly prepared meals, too much bodily exertion, are all causes, which keep the mental faculties in action, even when the body is completely exhausted, and prevent the sleep of a sick man. The respiration of the patient needs watching as to its regularity and also whether the pulse beats normally.

General signs of disease can, therefore, be diagnosed:

- 1st. Through heridity.
- 2d. Through loss of power.
- 3d. Through non-assimilation.
- 4th. Through temperature.
- 5th. Through insomina and its reverse.

The time in which we can make observations, however, is very variable; we may notice the change in a minute, it may take us an hour, a week; yes, even months before we come to a conclusive realization of the condition of our patients. So in watching during long periods, we notice how well disease takes root in the body, too often, we cannot check its growth, as for instance in consumption.

None of the different apparatus making up the human body must be overlooked. We may detect our enemies in their layer, least expected, and it is like warfare, in taking advantage of the enemy when he is not watching you.

The *organs of nutrition* assist us greatly in locating and determining the course of disease.

Appetite and a clear well defined taste for food are good signs of health and the loss of these surely means mischief. When the baby finds difficulty in taking its natural food you may be sure, that its nasal passages are obstructed and has to breath through his mouth, by which air enters into its little stomach and which, besides catarrh in nose, give the little one wind colic and disorganization of the organs of digestion. Through the catarrh, inflammation of the mucous membrane of the nose will insue, the mucus, if not removed, will descend from the little nostrils to the upper lips causing inflammation of the tender skin causing roughness in same. Thus through carelessness we sow the first seeds of scrofula in children. Similarly will inflammation of the cavity of the mouth act, only that its consequences are more troublesome.

If we have trouble in swallowing food, it shows that the mucous membrane of the mouth and gullet are diseased and need attention.

The tasting of food after it has entered the stomach shows that that part of the digestive apparattus is out of order, The accumulation of wind proved that disintegration of food and forming of gases takes place without a sufficient assimilation. Vomiting, especially in babies, when the milk is not curdled, is a sure sign that the stomach emits insufficient quantities of gastric juices, otherwise the process of fermentation would have taken place. Mistakes in diet are usually relieved by vomiting, but this operation is weakening to the muscles of the stomach and frequent mistakes show evil signs, and the most terrible of these is the stomach of the drinker. Instead of the read color of the stomache in health, its aspect is of a slaty grey, with expanded blood vessels without elasticity and weak in structure. It is always shrunk, this owing to the scarcity of food which entered into it. Often we find the residue of ulcerations and inflammations which in time would have become ulcers, had not the weakened condition been unable, to prevent death, of a life badly spent. Nervous pains in the stomach are often accompaniments of other illness, especially in the female generative organs. They show themselves nearly at every period and the vomiting after conception may be considered a sure sign of approaching motherhood. They serve to notify the young wife that she has been blessed and that she may prepare for her most honorable calling, *mother*, by a proper diet and clothing and

manner of living in general. If she violates these rigid laws of nature, not only the offspring, which from now on will carry for about nine months under her womanly heart, will suffer throughout its worldly life for her indiscretion, but also herself will partake of the the punishment nature bestows.

If we follow the tract of the nutritive organs into the intestine; first, the duodenum, we find that badly digested ailments in it have a tendency to cause inflammation similar to that which takes place in the stomach. When we vomit, and find in the excluded mass, either by observation or smell, the existence of bile, it shows that the intestine is in a diseased condition. Then it is in the duodeum that the bile is delivered which in health has only an excretory tendency; if the mucous membrane of the intestine becomes inflamed it closes, by means of swelling the common duct which delivers the bile. This substance being needful in digestion, these functions so necessary to life become lamed. On the other hand, our blood, from which the bile is secreted, has no canal left by which it can be eliminated, so it must remain in the blood and thus it is that we have billious attacks, billious fever, congestion of the liver, and a number of other disagreeable diseases. The signs are usually a yellow skin, dark rings around eyes, irritability of temper, cold feet, dark urine and a general bad feeling. Other ailments of the intestine are caused by constipation, telescoping of intestine, twisting and hernia, which, however, will be more fully described under the treatments of the specific diseases. All of these conditions, however, have a tendency towards inflammation of the mucous membrane of the intestine. How the interference in the digestive tube causes and acts upon a sick body, shows us the appetite in the shape of hunger, then it is an even thing, whether our body receives nutriment, or whether that we place in it is not digested.

The *respiratory organs* require *pure*, not too dry air, for inhalation and a sufficient exhalation of the carbonic acid. This is the only true and reliable remedy against *consumption*, and where we can find these atmospheric conditions, that is the place for consumptives to live.

Mouth and nose are the portals through which air enters and leaves our body. The inhalation through the last mentioned organ is preferable, as it becomes tempered in its nasal canal and becomes relieved of many impurities. The respiration through the mouth has disadvantages, inasmuch as cold air is uncomfortable to the teeth,

dry air absorbs too much moisture from the mouth and causes a parched feeling to the mouth. As a general respiratory organ the mouth should only be used in speech and song.

Exclusive respiration through the mouth is a sign of disease and shows that the air passing through the nose irritates the membrane or that its passages have become contracted through inflammation, or that the catarrh has clogged up the passages. So that while naturally breathing through our nose, in case of indisposition of that organ, we resort exclusively to the mouth for our air.

Breathing through mouth alone leads to many diseases and show themselves by a parched, cracked tongue, and thirst which is hard to quench. It is dangerous and may lead to inflammation of the larynx and whole respiratory tract and causes the expectoration of large quantities of mucus.

Breathing through mouth also causes snoring and blowing during sleep, so disagreeable to others in the same bedroom. The best remedy for snoring is to turn the sleeper over, or to transfer him to a bed which contains no feathers or soft substance to lie on.

Sneezing is a sign, remote, however, of an approaching indisposition and we may take it, as a warning, that the air we inhale is exciting to the membrane of the nose. Impurity, heat, cold and dryness in air are causes which induce sneezing.

In health, the catarrhal substances we remove from our nose, by means of handkerchief, are protectors to the nasal membranes, in as much as to it adhere a great many particles, which otherwise would pass in to the air tubes. But in disease this catarrhal mass contains also the product of inflammation along the tract of the mucous membrane lining the nose and should not be allowed to come in contact with other part of the mucous membrane of the body, as by it, a similar inflammation can be transplanted.

Thus it comes that catarrh of the nose is transferred to the cavities of the mouth and windpipe, and also to the outer portion of the lips. By swallowing some of this catarrhal mass, it may cause trouble in the stomach. It occurs for instance, when we have catarrh, only slightly, and when asleep the mass accumulates in back of mouth and unknown to ourselves swallow it. So when on next day we feel mean in stomach, we imagine that another ailment has made its appearance and of a different nature.

The same occurrences will take place when we have bleeding from

the nose, and its entrance from the pharynx into the air tubes or stomach during sleep. By coughing in the morning, and the expectorated mass contains little particles of blood, we imagine weak lungs, or vomiting blood from the stomach, we come to the conclusion that ulcerations in that organ takes place. All these fears come from simple ignorance and no guide to investigate the cause. If not chronic and excessive, a little bleeding from the nose is no cause for alarm whatever, it only shows that irritation has taken place, or that our hearts are a little too liberal in the distribution of blood to that organ.

Sometimes we find obstructions in the nasal passages, which are caused by children in their play, to place foreign matter in to these cavities, and which become fastened through the inflammatory swelling of the mucous membrane. Growths of a disagreeable nature often obliterate the nasal passages, but usually only one at a time.

The sense of smell is usually gone in catarrh. In nervous troubles this can occur also, even to such an extent that this sense is entirely obliterated. The former is only of a temporary, while the latter troubles have been known to remain through life.

Nasal diseases, by some unknown preference, have a tendency to transplant themselves upon the larynx, and vice versa, and not upon the tonsils. Consequently the existence of catarrh speaks for the non-existence of diphtheritis. It transfers itself often, however, to the eyelids, thus we notice our tears running in severe catarrh, or to our internal ear, causing slight deafness, it having found its way through the Eustachian tube, the connection between mouth and ear.

Diseases of the larynx usually manifest themselves by speech and breathing. The voice loses its clearness, becomes hoarse, without further signs of disease, such as cough, expectoration, pain caused by illness of the surrounding nerves and muscles. These latter show themselves very rapidly, even in a malignant form and become hard to cure. The first symptoms should receive careful attention.

Trouble in inhalations and exhalation, often accompanied by a piping noise, caused by laxity or paralysis of the vocal cords or swelling of the larynx, often turn out fatally. The latter is usually accompanied by the growth of a membrane over the entrance to the wind-pipe.

With children it happens frequently, and mostly a little after midnight, that they awaken with an ill sounding cough, accompanied by a short breath, actually gasping for air. These symptoms are nothing

but a plain catarrh of the larynx, but are usually taken for an attack of croup. The parents are scared and in their anxiety send for the doctor, but before he arrives the child is soundly asleep, having loosened the phlegm through coughing, and instead of expectorating same has swallowed the mass.

Cough is caused through excited places along the air passages and the action of the nerves thereon. Also by careless eating, by getting of food particles into the windpipe. Inflammation of the windpipe cause a tickling sensation and induces coughing. The patient can be relieved of a great deal of coughing by keeping the air evenly tempered and slightly moist. The nurse must also prevent unnecessary excitement, calls of gossiping acquaintances and neighbors; exertions through sitting or standing postures. The acuteness of the cough is best watched while the patient is asleep, for during this period nothing but the natural causes would be the inducement.

Phlegm, so far as it originates in the respiratory apparatus has a tendency to irritate the mucous membrane of the same, and in consequence causes the cough. This is in a majority of cases the cause of coughing. The quantity of phlegm expectorated is very variable and depends upon the nature of the disease. Bleeding from the respiratory apparatus leaves very little doubt as to its origin, when the blood is of a red, foamy quality and caused through coughing. It is instinctive to the patient to judge its source, owing to the sweet sickening taste and odor of the blood. It is the exception that these hemorrhages from the lungs are fatal in their first appearance, but they have a very depressing tendency upon the patient. Care should be exercised by the nurse, not to excite the sick in this stage, as relapses are of frequent occurrences and often fatal. Courage should be instilled into the sufferer, by word, that it is of no danger and only a passing incident in his sickness; the trained mother or nurse, will not even show anxiety on her face or in her action, and by it contribute to the alleviation of stress in the patient.

The respiratory movements in an adult healthy being follow each other for the most part with great regularity, at the rate of twenty inspirations per minute. This rate varies, however, under different conditions, one of the most important of which is age. As a rule, respiration is more rapid in children than in adults, and the standard rapidity is usually reached at the age of 15 to 20 years. Difference in posture also changes, so it has been observed that one person, while lying down, 19 respirations per minute were counted, and 22

while standing. Any special muscular activity, such as walking or running will also increase respiration, but come back to its normal state again, as soon as the exertion has ceased. In old age it diminishes considerable.

In disease respiration usually increases and especially so in fever, the tight lacing of females has a similar effect. The same takes place when we overload our stomachs, by accumulation of gases in the abdomen. But the strongest increase will be noticed in diseases of the larynx and lungs and in undue excitations of the nerves. In abnormal mixture with our blood of spirituous drink, strong coffee and tea will also facilitate the increase in breathing.

Irregularity in breathing, as to pauses between inhalation and exhalation are mostly noticeable in nervous complaints.

The digestive apparatus offers only to the body nutriment at certain intervals. The tissues of the body have a storage capacity, from the contents of which the body can draw, thus our fat is only a reserve for the body to fall back on, and even the muscles will be used for the same purpose. But a faulty respiration will soon lead to a scarcity of oxygen in the body and a surplus of carbonic acid, under which condition the body will invariably suffer.

The vague feeling in head, laxity of body, the pale color in face, contrasted by the hectic flush and bluish lips are unmistakable signs of irregular changes in the gases used by the blood and are forerunners of diseases which have their seat in the respiratory apparatus.

The Blood and its Circulation. The signs of disease, which give us information, in regard to it, are liable to manifest themselves all over the body; then all the organs with which the blood comes in contact are liable to be affected.

The color of the skin and the visible mucous membrane are of great importance in determining the condition of the blood. Do we not know with what rapidity this life nutrient acts upon these organs by observing the changes in their aspect? The quick changes in the healthy flesh tint and the red of the lips are evidences of the influence of the blood, when we notice the palor of the face, when one becomes scared, the red, caused by the rush of the blood to the face in shame and excitement and the bluish tint on our lips in anger. It shows the different distributions of the blood in these stages. In severe losses of blood we will also notice the waxy appearance caused by the absence of the colored fluid in the respective organs. The absolute

quantity of blood remains a stationery one in the body and even in loss, its quantity is replenished by the moisture existing in the body, which, however, does not assist in its nutrient qualities. In inflammatory or other swellings blood in larger quantities exists in the affected regions, hence the taunt condition of the skin. The reverse occurs when there is a scarcity of blood and the parts will be relaxed and shrunken to the touch. These rules are applicable to all parts of the body, the internal as well as the external organs. The organs most affected, however, are those most distant from the heart, as by the distance it has to travel to these outlying regions, power requisite in its distribution is lost to some extent.

Causes of impoverished blood have a tendency to a chilly feeling and cold, and especially are the ears, nose, hands and feet affected. By the absence of sufficient blood to any of these, or other organs, the nerves become afflicted for want of nourishment, and become easily excitable and in this flighty condition, extreme temporary rushes of blood may be transported to the affected organs, and thus transferred, partakes of the chill or cold and transmits by these means a change in the temperature of the general circulation. The suction and expelling power of the heart are also affected by this condition, to such extent that the venous blood becomes lax and is not relieved of its carbonic acid, and through the affected respiratory organs, not sufficient oxygen is brought into the body to make the changes necessary in the condition of the blood. The bluish appearance of parts of the body, subjected to cold is due, that the venous blood is not flowing with the required rapidity. Weakness of body will show itself in this condition by a cold clammy perspiration. Gasping for air shows that our blood corpuscles do not find sufficient oxygen in the lungs, causing the rapid beating of the heart and an anxious feeling. The accompanying irritability and excitement of the nerves causes unaccountable noise in the ears, flickering before the eyes, general weakness of the organs of sense, twitching of the muscles, and even cramps, if the blood supplied to the brain is insufficient in quantity and bad in quality.

Regarding a surplus of blood in the body, let it suffice, that it is of rare occurrence and can happen, and only temporarily at that, immediately after a very full and rich meal of nutrient and easily digested victuals, by carefully measured use of stimulants and insufficient bodily exercise. The latter if taken will usually remedy the uncomfortable feeling incident to it. Under extraordinary conditions, a healthy body, sometimes succeeds to enrich his blood to such extent, that a

scarcity of oxygen becomes apparent and in this way, one will become fat, and the more of this a body accumulates, its functions become impoverished, for the preservation of health and the performance of its duties.

Thus when one tries to accumulate fat or bodily increase and forces himself, the appetite will become depraved and it will require conditions to excite it, the fatty degeneration of the digestive tube loses force and becomes inactive, the same will happen to the liver and cause an interference in its functions; the heart under its load of fat becomes weaker every day, then it finds no extra nutriment for the additional load it carries and work it performs. The venous blood slackens in its course and consequently gives no push to the arterial or tissue building blood. The body in this condition wastes the nutrient qualities of the blood, by forcing the albuminous substances into the kidneys and out of the body. The kidneys object also to this extra work and rebel; sickness ensues and you find them in gouty swellings and diseases of the kidneys and urinary organs are general.

Prevention is always cheaper, so do not make a glutton of yourself, especially if you have a natural tendency to corpulency, but give your body physical work.

Diseases of the circulation are usually founded upon the power of the propelling organ, the heart, or in contraction and expansion of the blood vessels (arteries, veins and capillaries). The signs are best observed by the pulse and the different organs, when a change in the supply of blood has taken place. The movements of the heart lead us also in diagnosis, in complaints of this character, but it takes a trained practitioner to observe it.

The widening and contraction of the blood vessels are properly classed with the diseases of circulation. Among the causes we find chronic catarrh of the stomach and intestines, pains in the testicles and cramps in the calf of the leg. But the most disagreeable form of these diseases is what is commonly called dry or itching and bleeding piles or haemorrhoids, situated in the rectum. They are extremely painful, and no relief in the natural course is afforded till they burst, by which, however, a wastage occurs of the nutrient fluid of the body, consequently weakness will ensue.

The most important influences in the circulation are the organic faulty constructions of the valves of the heart. This is very troublesome at times, the specialist in diseases of this character may give

temporary relief, but to insist that any one can create intricate parts of the body is all folly, and will only be believed by people who are very ignorant.

Bleeding through wounds needs careful attention, may they be ever so small, every drop of blood wasted is the loss of so much power.

Inflammatory ulcerations in the lungs may cause hemorrhages and it will be noticed by the phlegm expectorated. Similar troubles may occur in the stomach or intestine and will make itself known through the blood. If the kidneys are thus affected we find blood in the urine. Also the ulceration of the ureter, bladder and urethra, notify us by the same excrement. Typhoid fever consists of intestinal ulceration.

The symptoms of diseases connected with the *Lymphatic* system are best and can oftner be observed by wounds of the skin, be they ever so small, and not kept strictly clean and disinfected. The placing of sticking plasters on open wounds is a great mistake and often revenges itself upon the transgressor. The pus is mainly the cause of supperation, and while in this condition the weavingtogether of the tissues cannot take place. It must, in view of this fact, have free exit from the wound before we can think of healing, The plaster would prevent the discharge of the pus and it would necessarily retrograde and seek an opening at a different place. The careless paring of corns and bunions, as well as chafing of badly fitting footwear, lead often, to inflammation of the lymphatics. If you wash your feet nightly instead of weekly or fortnightly, there is little danger of this disease. Think for a moment how many resort to this inexpensive healthful water every night.

What we observe in the supperation of the skin, we may also find in the inflammation of the mucous membrane Inflammation of the eyelids, the tympanum, nose, tonsils of the neck, all lead to the swelling of the lymphatic glands and ducts, spreading very rapidly. The fatty layer under the skin is especially a conductor of this disease. Inflammation and suppuration of the muscles, also has a prediliction to lead to diseases of the lymphatics, and often carry it to the periosteum and even the bone. In fact, inflammation in any of the soft parts of the body lead to lymphatic troubles. Very often the lymphatic vessels suffer much from the poison they have absorbed, and when this has been conducted to the glands, the latter will enlarge

very rapidly. The skin covering becomes red, the fatty tissues swell; one feels the accumulation of pus. Warm poultices should at once be applied, through which the pus is drawn to the surface, breaking the skin and leaving the body. In this stage the patient has often a strong fever. The inflammation of the glands connected with the generative organs are especially painful and troublesome and often are the cause of transmitting their poison to the whole system. Syphilis, scrofula, hydrophobia, glanders, all the different pocks are diseases having their origin in the disorganization of the lymphatic system.

The *signs of disease of the excretory organs* we observe in two directions. The quantity and nature of the excrementitious substances. They are formed for the most part in the tissues, from which they are absorbed by the blood and conveyed to excretory organs, by which they are discharged. If their elimination is impeded, their accumulation in the system produces disturbance, which is more or less, according to their character and the rapidity of their production. This disturbing influence is especially manifested in its action upon the nervous system, causing abnormal irritability, derangement of the senses, delirium, insensibility and death.

In the normal condition and in normal quantities, the excrementitious matters are not poisonous, nor even deleterious; they are the natural products of functional activity, and therefore as essential to the manifestation of life as the nutritious material supplied by the food. It is only when the elimination is retarded that they interfere with the performance of the functions, by deranging the constitution of the tissues.

Some of the excrementitious matters produced in the body are probably eliminated, in small proportion, with the perspiration or stool; carbonic acid is abundantly exhaled from the lungs. The most important of these substances are eliminated, however, from the body by the urine, of which they form the characteristic ingredients.

The urine is, therefore, solely an excretion. It contains most of the mineral salts discharged from the body, and by the water which holds these matters in solution it represents a large proportion of the fluids passing through the system. Furthermore, accidental or abnormal ingredients introduced into the blood are usually eliminated by the channel and appear as temporary ingredients of the urine. The constitution and variations of the urine during health, and its alteration in disease, are regulated by the corresponding changes of

nutrition in the body at large. It is, therefore, one of the most essential products of the animal system, and its formation is second in importance only to the function of respiration.

The urine excretion is often above the normal quantities, as in diabetes and after hysterical cramps. The partial or complete non-elimination lead to death. In fever the output is less, but increases as convalescence progresses. In the beginning of inflammation of the kidneys it is very little, but the elimination becomes gradually normal again, when the inflammation becomes less and ceases.

The color of urine varies much in disease and thus we find by observation the following shades. Pale, light yellow, chrome yellow, orange, red, dark red, brown, and sometimes even approaching a brown black. The color is caused by the destruction of the red blood corpuscles, and is, consequently in such diseases as typhus, more prominent, inasmuch as they have a tendency to accelerate such destruction. Pale and yellow urine, we find mostly eliminated from such patients, whose blood is not of a rich quality and in those who are getting over a sickness and in nervous troubles. In jaundice, urine assumes a color somewhat like dark beer with a yellow foam. This is caused by the elimination of bile through the kidneys.

Sediments form often in the night vessels, and takes place either immediately after urinating, and sometimes after a while. Such urine should be at once taken from the sick room and the vessel thoroughly cleaned and disinfected.

Even in slight indisposition the color of urine changes and is marked by a strong yellow, orange red, or brown precipitation, usually the advance agents in fever.

The urine sometimes contains mucus, pus and blood; these symptoms are critical and show ulcerations in the internal structure of the track of the urine.

One should urinate before we feel a pressure as the neglectful elimination leads often to various complications, such as catarrh of the bladder and often to deathly inflammation of it.

It happens, often, even after years, that the inflammation of the urinating apparatus, leaves traces, recognizable by the difficulty experienced in urinating, which is owing to the contraction of the tissues, and consequent partly closure of the apparatus. This, however, may also happen in old people and be caused from a general collapse.

It is very suspicious of stone in bladder, where one experiences the certain stoppage of flow of the urine, with pain in the regions above and below the sexual organs. If the latter symptoms are accompanied, in the morning upon arising from bed, by gagging and vomiting sensations, pains in the loin, swelling of the upper, and especially the lower eyelids, and also of the feet, it may be taken as a very strong indication of an approaching kidney disease.

The excretions, by means of perspiration, are great aids in diagnosis, and a trained eye need not be told retrogression of perspiration is a bad sign and shows that the elimination of excrementitious matter by these means is stopped.

The excrement of perspiration is caused by the excitement of the nerves. In a state of health heat causes the solution of sweat and cold ceases its flow. In the latter the skin is contracted through cold and in the former opened. Closing and opening of pores and an act within the human organism conformable to the laws of nature.

A patient in state of perspiration in a heated room is exposed to more danger in contracting cold than in a room of normal temperature, for the reason that the heated air will absorb the moisture on his body, far more readily, and through this absorption of moisture in the immediate vicinity of the body it becomes too suddenly cooled and has a congestive tendency.

Too much care cannot be exercised with patients who are temporarily mentally incapacitated, and who cannot reason for themselves. Their exposition, when in a state of perspiration, often proves to be the beginning of the end.

Never suppress perspiration in cases after fevers, they are the advance messengers for an early convalescence. To suppress perspiration of feet is one of the most dangerous experiments and leads to congestion of the venous blood vessels, consumption, etc. Better bear the disagreeable features and alleviate the illness by frequent washings.

The odor caused by the evaporation of excrementitious matter should never be noticed in the sick chamber, and also not in the living and sleeping rooms of the healthy. Resort to judicious ventilation, without causing a draught, and be convinced that pure fresh air is a balm and not a poison. People who are afraid of pure, fresh air are still in existence, to a very large extent.

The symptoms of disease of the *protective organs of the body*—the

skin and its appendages—the visible mucous membranes, are of particular interest, inasmuch as they give us something to see and to feel, obviates the necessity of going by signs, only indicative. Thus we can plainly perceive diseases of the skin, wounds, ulcerations and their contagion.

Furthermore, the walls show us not only their own ailments, but also of the organs dependent on same. Diseases, such as pocks, scarlet, measles, jaundice, poverty of the blood, show themselves very decidedly on the outer surface of the body, but do not have their origin there. Catarrh of the stomach causes the skin to lose its fresh flush tint and assume an earthen color. Only a faint bronchial catarrh causes a pale bluish aspect in face. Sluggish blood leaves its trace by a flatulent appearance and too much activity in the circulation, especially when in the direction of the brain, protruding blood vessels and a reddish look.

Dissipation shows itself to even the untrained eye in a sickly palor of face and impaired mental faculties.

If we take it as gospel truth, that the eye is the mirror of the soul, we can truthfully assert that the skin is the same of the body. We read with our eyes the status of disease of our fellow being, if properly instructed, and this A. B. C. etc., will make you comprehend the silent lecture, the father, mother, brother or sister, has often to attend.

Instinct tells us to aid those who are suffering, the majority of mankind is willing to extend aid and this little volume is surely a means to administer the needed aid intelligently and effectually. Only master the intricacies of the body and you are not only an aid to yourself, but also to others.

The color of the skin is established by the pigment it contains in its tissues and by the quantity and condition of the blood. The latter changes, however, frequently, according to the general condition of itself to the body and vice versa. So with these changes of the blood, the color of skin being dependent on same, its aspect also assumes a different hue. Changes in color of skin caused by exertions, either mentally or bodily are a passing and only temporary event. If persisted in, they will lead to disease and show themselves in the color of the skin.

Simple inflammation of skin we notice mostly in children and corpulent persons, and is either caused through friction, non-removal of sweat, urine and mucus in diarrhoea. It is also brought about in abnormal excretions, burning or frost.

Eczema is an inflammation of the skin in consequence of congestion. It is mostly a disease of the face.

Typhoid fever shows red spots on the skin of abdomen in second week.

In syphilis, about two or three months after contagion, dirty red spots make their appearance on trunk and joints, and which become more decided when that part of the body comes in contact with cold. These eruptions have no itching or burning sensation as might be anticipated.

Measles, accompanied by catarrh and an itching sensation of the eyelids, make their appearance first in the face in the shape of slightly raised, commingling spots, and from the face spread to all other parts of the body.

Scarlet commences with fever, inflammation of throat, and prickles in the skin of a scarlet color, and not well defined, first on the neck and then the rest of the body, usually allowing the face to escape.

Inflammation of Skin with perspiration in the tissues causes the formation of little knots, which are the origin of a itching and burning sensation. If no vent is given to this sweat the horny part of the skin will form into blisters containing the excreted fluid. They are frequent at the corners of the mouth and signs of bad digestion.

The skin excretes also a tallow through the sebaceous glands. Any interference with this excretion leads to the formation of little tallowy white knots with black heads on face and body. They are easily removed by pressure of a watch key on them (acne.)

Barbersitch is an inflammation of the roots of hair, often very obstinate.

Itch is a congregation of an animal parasitis, the itch-mite, in the skin; auguring channels in the tissue of same, which causes the agonizing itching. The disease is contagious.

Corns and bunions are an enlargement of the horny part of the skin, always caused through some mechanical friction. *Warts* are swellings concerning the whole tissue of the skin. *Liver spots*, usually with hair are entirely harmless and are so-called mother marks. To remove them, the surgeon's knife is necessary, but in this operation the cure is worse than the "disease;" leaving a pit, similar to that of small pock.

The skin is always more or less affected in all inflammations, as in

furuncle, consisting of an inflammation of the skin and fatty tissue suppurating with a central core—a *boil*. Its origin is usually at the follicle of the hair.

Carbuncles are a very painful acute local inflammation of the underlying tissues of the skin and have a predilection for the back of trunk or neck. They are characterized by brown hardness of the affected parts, sloughing of the skin and deeper tissues and marked constitutional depression. It differs from a boil or furuncle in size, tendency to spread and the absence of a central core. Carbuncles are frequently fatal.

Felon or Whitlow is an inflammation of the deeper tissues of the finger or thumb and occasionally of the toes. The pain commences, with pricking, throbbing and inflammation and is inclined to suppuration. Its process is slow and often affects the bones and sinews to such extent that loss of movement of joints occurs.

Fistula often originate through minute ruptures of the skin and from inflammation of the muscles, sinews and bones. They consist of abnormal openings discharging pus. They are dangerous if they spread under the skin.

Wounds in Skin depend on their causes, such as being stabbed or bruised. They are dangerous on this account, that where they occur, the body is robbed of the protecting skin. They are also to be carefully watched that no foreign substances enter the apertures, especially blood poisoning substances. The fangs of the snake, the tooth of the rabid dog or other animals, and the cut of a knife, previously in contact with spoiled meat or leather give us unquestionable proof of poisoned wounds. Immediate disinfection and proper bandage are proper safeguards in the first instance. It is better to have a wound bleed freely than to stop the same and allow it to accumulate in the wound; blood coming in contact with the air is easily disintegrated and carries decomposition to adjacent parts.

Granulation of Wounds is always a good sign of healing, and not, as many imagine, that the little red spots of a wound are putrid and will cause spread of suppuration. It is only in contagion, that granulation cannot guard the body, as in hospitals where wound fever prevails; its germ may end in diphtheritis and blood poisoning.

Lastly in the healing of wounds, we often, yes, nearly invariably perceive pain, which is caused by the contraction of the tissues and enclosing upon the termination of the nerve fibres. Does this process

set in prior to the entire elimination of the pus and thus bars its egress, wounds are liable to break out on other parts of the body

The blood and lymphatic vessels having carried the poisonous substances to the regions where inflammation and subsequent suppuration occurs. Thus you see the cause of swellings on parts of body, where you had no reason to suspect disease.

In diseases of the *muscles* we are mostly interested in their precision, power, elasticity of movement, and staying qualities; also their quantity and solidity. They sometimes pain in movements and when subjected to pressure. Weakness, paralysis and cramps are usually of a nervous origin. It is necessary to find out which muscle causes pain and what its origin is. Loss of power is always accompanied by wastage of muscles and the indication is first shown by a certain softness. In certain diseases the muscles vanish beginning at the ball of thumb, hand, arm, etc., as it may be noticed in case of lead poison.

All muscles which have been bandaged, especially in plaster, and have, during this time, not participated in the general activity of the body, become weakened and somewhat wasted, which in the course of disease is an important sign of different diseases.

Bruises can ruin a muscle totally. If a muscle is cut transversely, its fibers will draw back. On the trunk it may happen that the muscles become separated from the tendons. In all such cases the open or closed cavity thus formed will fill with blood and then healing sets in. Similar is the action on sinews, but the healing of same takes a longer time, inasmuch as they are not so well supplied with blood.

Local muscular rheumatism and lumbago, if it is in the back or loin, consists of pain, of a stretching or tearing nature, and has its origin either in nervous excitation or fatigue and mainly through cold. Muscular inflammation with formation of pus is a very dangerous disease and has a predisposition to lead to blood poisoning. The origin of this may be either from its connection with diseased bone, or from deep wound in the muscular structure.

Bones. The diseases of this part of this part of the human anatomy are of a varied nature and especial attention is to be recommended in case of inflammation of the bone, owing to its origin, from the marrow of the bone. Inflammation of the bone usually appears in children and is marked by a chilly sensation and strong fever, similar as in *Typhoid*. In such appearances investigation of the whole body is

necessary. In an acute inflammation a certain decomposition takes place, and such diseases are classed among the most difficult to cure. They need the best professional attention obtainable. The chronic inflammation of the bone, which usually appears in old age is also of a serious nature, and consists of a melting of the bone and disintegration and leads to wastage of flesh. In the commencement of the latter disease it is often taken for rheumatism and is accompanied by a light fever, the skin becomes gradually reddened and shows a flabby swelling which when in state of suppuration produces a thin pus. The wound is surrounded by irregular warts and from tubular shaped openings flows for months and even for years a very liquid pus, till at last the poor sufferer is relieved by death. Often it happens that one of these open wounds heals for a time, but usually breaks out at other places. A real and effective cure of this malady is of rare occurrence and an exception to the rule. Often it happens that inflammation of the bones transfers itself to the joints.

Bruises in bones and fractures, which, through wounds in the skin and surrounding tissue, become exposed to air, even for a short period are dangerous, owing to inflammation of the bone, induced through this exposure. Thus we learn of the invaluable service of the skin to the body. A plain fracture of the bone or bones is of no danger however, although often very painful, as long as the skin has not been hurt to the extent of rupture. The first described injury to bone is doubtless dangerous, while the latter under proper care and treatment is of no other consequence, as the temporary inconvenience. In order to avoid disfigurement of body and remorse in after life, any bones which have become fractured, especially those in the upper and lower extremities should be set and bandaged by an *experienced* surgeon.

Contusions and *sprained joints* lead to swellings in the injured parts, and also prevents the active and passive movements of the same either through intense pain or through the tauntness of the swelling about the formed cavities of the joint. After a few days, in case of contusion or sprain the skin becomes discolored through the internal emission of blood. By ordinary care the blood will be absorbed by the vessels, but care must be taken after this, unless inflammatory troubles might form. Frequently the cartilages of the joints are injured by rupture, in which case the joint water or fluid leaves the cavities, as in the fracture of the kneecap.

Dislocation of Joints is the separation or the ball of bone from its

corresponding socket. The direction of the dislocation regulates the setting of course, by an experienced surgeon, and as soon as possible after the injury has been done.

Inflammation of Joints is marked by swellings, heat, strong pain and loss of use. These symptoms lead to the formation of pus of a watery nature, which after suppuration comes to an open wound. Inflammation of the cartilages of the joints are often classed with rheumatism. These ailments must be properly attended to if you do not want misformation of the joint or, as often happens, the complete loss of its use.

The diseases of the joints are mostly consequences of local injuries, which have not received proper care at their insipidity. Never wait in an accident, however so trifling, till fear sets in or the formation of inflammation and pus. Scrofula, Blood poison, Diphtheritis, Scarlet are the diseases which after a cure of them has apparently been affected, re-appear in the shape of joint troubles and the common acute rheumatism of the joints in after life is doubtless attributed to them.

The reader has learned and, it is hoped, has not forgotten the important functions our nerves have to perform, and from it you have seen, that if the body, as a whole, is ill, the nerves partake of the ailment.

Disease of the Nerves themselves is best seen by their excitability, which is ever-present, when any of our organs are dilatory in any way to the nerves. Thus are weak nerves or general nervousness attributable to the nonfulfillment of functions of the other organs.

The nerves are irritated by our mental faculties, in thought and action, by our surroundings of solid, liquid and gaseous substances and coming in contact with our body. Also through mechanical and physical power; such as shock, pressure, friction, heat, light, cold, electricity and magnetism. Lastly also through the organs of our own bodies in their condition and functions. In our study we can easily change night into day but in doing so, will not succeed to the advantage of a sound and healthful sleep. Through the effect of strong coffee or tea we can drive away sleep and thus compel our nerves to do without the necessary rest, the only tonic for overworked or weakened nerves.

In cogitating about the many men and women, who suffer from nervousness, have you ever thought of the origin of this modern disease? You can have a clue, if you only think of the constant influence the following articles will have if you use them to excess.

Tea, coffee, beer, wine. alcoholic liquors in general, tobacco in all its forms, besides these social and professional excitement, overwork and the numerous cases to motherhood have a tendency, to deny us the treat, which consists in normal and well rested nerves and their functions.

The nervous constitution is of modern origin and attributable to the overindulgence of the previous mentioned substances and neglect to give our nerves a rest. From year to year we can notice the increase of nervous diseases and the undermining of bright intellects to be buried alive in the modern chamber of horror—the insane asylum.

Excitement, if normal, is of as particular harm to our nerves, but to recapitulate and increase is dangerous. The nature of the excitement is also of no moment and we can paralyze their function by joy, scare, anger or the using of deleterious, still well tasteing substances.

Numerous cases of cerebral apoplexy are on record and caused by over joy, mental excitement and concussions.

Overloading the stomach will irritate our nerves and stop digestion.

Diseases of nerve tissue are similar to the other structures in disease. To cause these a surplus of carbonic acid in the blood and a scarcity of oxygen will suffice, and thus it happens, when we have nervous disturbances that we gasp for air,—we want the oxygen. Narcotics like opium, and chloroform deaden the nerves and especially those which regulate the circulation.

The nerves become *inflamed* in harmony with the other tissues and their sensory power carries the pain incident, throughout the whole body. Thus when we hurt our elbow projection, a place where the nerve fibers lie closely to the surface, we preceive the pain into the extremities of the fingers. If you are troubled with corns or bunions and are of an experimental turn of mind, invite some corpulent person to step upon them, you will have pain all over the body. Sometimes we exclaim that some of our extremities "*have fallen asleep*," or been benumbed; in such cases we interfered with the circulation and robbed for the time being our nerves of their nutriment.

Close observation and investigation furnishes us abundant information about the kind and location of nervous affliction. Nervous troubles are very painful and it is not in isolated cases by any means that the sufferer of cramps and neuralgia has resorted to suicide, to relieve forever his physical ailments. Often the very smallest inter-

ference with the nervous functions and tissues are causes of intricate diseases. A minimum hemorrhage can rob the patient of his voice, or the functions of the heart may cease. Hysteria and cramps benumb the sufferer and his or her friends witnessing same are scared unto death. Whether these symptoms are dangerous to life, or whether they are the cause of untold pains, or pain and anxiety of those surrounding the sufferer, the best consolation and assistance to the patient is a careful investigation of the disease which enables you to act accordingly. To do this intelligently, so that your efforts will be crowned with success is the object of this work.

The untold agonies a patient suffers from badly informed nurses, have often been the cause of dissolution and we must insist that before the patient is shaken, or cold water is thrown upon him, or talk to him in a loud voice, or in order to awaken him from his lethargy, that you inform yourself of the cause. The usual demonstrations just mentioned and so often resorted to are in many cases harmful.

For the continuance of life it is necessary that the functions of *respiration* and *circulation* are in activity. Have they ceased, or are insufficient through some cause? These are questions, which, in certain dangerous catastrophes, are answered by the patient, by his imploring look, or gasping for air, or moving his hands to the regions of the heart. If the sufferer is incapacitated or even beyond the performance of these signs, place your ear close to his mouth or nose and observe whether his respiratory functions are in operation yet, or place your ear over the regions of the heart, or hands, on one of the arteries at wrist or along neck and feel whether you can perceive the pulse.

In nervous troubles we must watch these symptoms with great care; acute diseases we must also watch with regularity of respiration and pulse, than if abnormal in this respect we can conclude that changes take place within the organism, which are no signs for the better.

Of great importance in nervous prostration is whether consciousness exists or not. Never resort to loud calls or any kind of noises; they are useless, and only cause shocks to the patient if his consciousness is not entirely gone. The tickling of the mucous membrane in the nasal cavities, slight rubbing of the tongue and palate by means of a teaspoon handle irritates sufficiently to make the respiratory nerves do their duty and you will soon be rewarded for your endeavors by observing his breath. The nurse must not become anxious when a patient does not resort to speech for some time, and in fact should not be urged.

We cannot assume that death has made its appearance, even when we do not perceive respiration, circulation, consciousness or locomotion. In such condition the sufferer is in a trance. Do not resort to such nonsense as holding a mirror over a patient's face or pinch him, but endeavor to restore respiration by gentle rubbing of the chest and having as few persons in the room as possible, and be careful to keep up, by artificial means, the temperature of the body. Slight and gentle rubbing of the wrists and turning the patient from side to side will aid in the restoration of some of these paralyzed functions and by these careful and tender cares, death has been robbed many a time, of a victim. Electricity, if applied by an experienced practitioner, is a great aid in restoration of nervous collapses, but the layman should never resort to same for fear that a too strong current might be the cause of dissolution.

In nervous diseases of long standing, where death is slow to approach, sickness destroys gradually, the power of the body and the patient suffers in consequence of the lack of nerve functions, to such extent, that he cannot even tell his sufferings. We must watch and assist, and at least endeavor to alleviate his sufferings. So when we see his mouth open, his tongue parched, his lips nearly cracked and sometimes even emitting the life's nutrient fluid—blood;—the patient suffers with thirst, and often has not the power to guide a refreshing draught to his lips, or to swallow the fluid when in his mouth. Assist and induce him by kind word and actions to endeavor to swallow and if successful, you can read thanks in his eyes which will be graven deep on your own memory. Usually when a sick person can not be aroused to respond to acts of kindness and service of love, he lies in his bed and apparently not caring the least for his surroundings, emitting a grumbling noise which are words beyond comprehension, pulls at his blankets, his respiration is hardly perceptible, but occasionally interrupted by sighs and gapping, his heart's action becomes feebler. It depends now on the amount of power he has left, but it cannot last forever, disease consumes it faster than his ill body can restore same. Breathing becomes slower, the intervals longer, likewise with his pulse. The end is approaching, suffering ceases, and the spirit of our friend has crossed the chasm. The nervous system, the intricate machinery in our body has collapsed, and the matter remaining will return to its origin—Earth.

The wounds or bed sores are caused by an abnormal inactivity of the skin nerves, and can happen even to such sick persons, who are cap-

able yet of moving to some extent in bed. The nurse can show his or her worth to great advantage in preventing this disagreeable and weakening disease, by cleaning the part of the body which comes in contact with the bed clothes, by gentle friction of the parts supposed to be on the down course, by rubbing the back and sides of the trunk and extremities with bay-rum or diluted alcohol. The life of the sick is in much danger, when aggravated by bedsores and his convalescence is more distant.

The stool and urinating ought to be specially watched in nerve affliction. In the last stages of diseases of this nature and many others, the emission of excrement becomes involuntary and shows the weakness of the nerves regulating these functions. It may also happen that these excrementory passages stop entirely, also for want of nerve power. In diseases of a serious nature, the latter will increase fever alarmingly.

A prominent part in nerve affection is played by the mental faculties, which are closely allied to the other nerve functions.

The formation of the brain is of an exceedingly delicate nature, so much that nature has provided for its protection, a strong box—the skull. Very fine tissues give the nerve fibres and cells a fixed foundation. Like all other tissues of the body, but the brain specially, these meshes, are interlaced with numerous bloodvessels, bringing, for the proper performance of its duty, nutrient matter, in the shape of arterial blood, through the arteries. From the capillaries the brain tissues receive it and also transfer to same the waste matter to be returned as venous blood to the heart. We notice through the heart's action the flow of blood to the brain, and from it, thus insuring the requisite temperature; circulation and respiration enlarges and decreases the contents of the cranium, best noticed by a gentle touch on the head of young children. The brain is also inclosed in a membrane same as the lungs, securing it against friction and thus enclosed in the skull, which is further protected by skin and hair. This most wonderful part of our anatomy, performs functions, truly phenomenal in their nature.

Concussions, pressure and friction are liable to break the skull and injure its contents and causing internal hemorrhages. Often, however, strong mechanical shocks, without breaking the bone lead to similar results and concussions of the brain. The impression of bone splinters from the skull, or hemorrhages, lead to inflammation of the brain.

Internally, many injuries can happen to the brain. Inflammation of the membranes causes disease of nerve cells and fibres. The frequent rush of blood causes congestion usually after hearty meals, or the over indulgence in tea, coffee or spiritous drink. The stoppage of the flow of blood in the brain causes the same trouble.

It is under such circumstances that old people die suddenly, their arteries and veins being weak through long use, become ruptured and overflow the brain—Apoplexy.

Poverty of blood and not a sufficient flow to the cranial regions, can be caused from external bleeding, or also from the general low quantity in body.

In sunstroke we see a picture of overheating the brain from external causes, and it is similar in fever, having its origin from the interior.

To cool the head externally use ice on top, to cool internally, make cold application along the neck, thus the blood flowing to the brain becomes tempered.

Chemical influences can only be brought to bear upon the brain, through the blood. To these belong tea, coffee, spirituous drink, numerous medicines are also made effective through the same channel such as opium, and chloroform.

Many poisons find their way to it by this route. Sewer gas, carbonic acid, lead, evaporations of arsenic, etc.

Tendency to sickness exercises its influence upon the brain. Pain, if strong, often benumbs our mental faculties.

The brain in itself is void of feeling, and only through irritations of the membranes are the origins of the numerous headaches. Light swoons and total loss of conscience are proofs of strong interference within the brain or of its functions.

Insanity is a disease of the brain, caused through excitement, as in delirium, mania and frenzy, or through organic weakness and paralysis, which manifest themselves in hypochondria, melancholia or idiocy. The insane are driven through wrong thoughts and conceptions to nonsensical acts and crime. Hypochondriacs imagine all sorts of things. Those suffering from melancholia believe that they have lost all friends, and lose even faith in God and human justice or believe that their footsteps are followed, lastly they feel insulted at almost anything, even kindness and often attempt suicide and murder of others. Idiocy is incurable, the afflicted are harmless and only through ignorance commit crime.

Of the majority of mental diseases few have a tendency to shorten life.

The eye is the seat of many disagreeable diseases, but its main interference is in its power to see. Near sightedness and far sightedness, or *myopia* and *hypermetropia*. These conditions of the eye lie in the faulty construction of the lens.

In *myopia*, or nearsightedness, the eye is otherwise, normal only its antero-posterior diameter is longer than usual, thus placing the retina at a greater distance behind the lens. Consequently the rays are brought to a focus at the usual distance behind the lens; this focus is situated in the vitreous humor, and the rays reach the retina only after their crossing and partial dispersion. This produces indistinct vision for remote objects. But for those at shorter distance the rays enter the pupil under such a divergence that their focus falls at the retina, and the object is distinctly seen. The evil is corrected by the use of a concave glass. *Hypermetropia* or farsightedness is a condition of the eye in which, through shortness of eyeball or fault of the lens, the rays of light come to a focus behind the retina. This inconvenience is corrected by the use of convex glasses.

The inability to distinguish various colors constitutes color blindness; weak eyes and flickering are diseases of the optic nerves. The involuntary flow of tears, blood shot, squinting, inequality of pupils or disproportionate opening of same, are attributable to the same cause, namely, that of the moving and optic nerves. The most important and at the same time excessive dangerous diseases of the eye are to be found in the retina. This should be left to a specialist in eye diseases.

We are very often troubled with our visionary organs, the usual care and all sorts of eyeglasses give us no relief. There are usually formations of membranes on the internal coats of the eyes, the lens becomes opaque or non-transparent, the vitreous and aqueous humors become clouded, the retina inflamed, the cornea loses its transparency, the lids are paralyzed and the tear apparatus refuses to bring forth lubricant. Thus our vision becomes inflected and we suffer pain. The least suspicion of troubles of this kind should hurry you to an experienced oculist, who has made a life study of the eye; even when it costs you every cent you possess or can borrow. Remember *sight is priceless*.

External diseases of the eye, such as sty, inflammation of the lids

or their mucous membrane are more easy to treat and do not require such profound learning as one might imagine.

The consequences of diphtheritis, scarlet, and sundry diseases also bear close watching as to whether these diseases do not intend to rob their victims of sight, out of revenge, for not having obtained the whole body.

The ear shows symptoms of disease on its external and middle part, and we can observe it even to the tympanum at the extremity of the auditory canal. Here we find often obstructisms in the shape of an accumulation of ear wax, which quite often obstruct the auditory channel. Our attention is drawn to it by queer noises more than by pain. Even in the perception of our own voice, the vibrations seem strange.

Small children often put peas or beans into their ears and thereby obstruct the passage. Sometimes insects, which defy the poisonous nature of the ear wax enter the ear, leave the sting of their fangs, causing inflammation and influencing our hearing capabilities and furnish germ for the transmission of diseases to the middle and internal ear.

The diseases of the middle ear comprise the tympanum and its cavity, the eustachian tube and chain of bones. Disease in this part of the ear is usually caused by transplanting the catarrh of ear and mouth. It is thus accounted for that we are hard of hearing when we are afflicted with catarrh. If the middle ear is affected, it causes heavy pain. Inflammation may be also transmitted to the tympanum and be ruptured in consequence and its cavity is then exposed to all sorts of weather. The mucous membrane suppurates, ear polyp are formed and pus leaves the ear, emitting an odor of a peculiar and sickening smell, which to some sensitive people is unbearable. Do not console yourself that it is caused by the breaking out of scrofula, which should leave the body and thus become cleansed. Parents will, in after life regret their neglect, when their offspring cannot enjoy the guiding words of father and of mother. Inflammation of the internal ear, as well as its middle portion, is easily transmitted to the surrounding bone and to the brain. In the latter case death comes like the thief at night, unannounced. Chills, fever, loss of consciousness and death is about the course when inflammation is transmitted to the seat of our senses.

In diseases of the internal ear deafness will soon make its appearance

This happens to children; they not only lose their sense of hearing, but also the use of speech, become deaf mutes.

Partial or total obliteration of the senses of smell and taste, are caused by nervous troubles, catarrh, and interference in the digestive functions.

The movements of the body shows deeds, and these are the fruit of thoughts and especially the manner of forming them.

The Carriage and locomotion of the body, countenance in repose or activity, and speech furnish us many proofs of disorganization of the nervous system. A frequent sign of nervous disease is shaking, and if especially noticeable in tip of tongue and fingers, it is a sign of alcoholic poisoning.

Cramps are spasmotic contractions of single or groupes of muscles and is a morbid condition in which excitement of the motor nerves is produced by an irritant of unusual, and, generally speaking, of unknown origin, and entirely independently of the volitation, or else to a condition in which the action of an ordinary stimulus calls forth an excitement of extraordinary extent and violence in the motor tract.

In cramps, which appear and pass off again, can be enumerated epilepsies which under that head will be respectfully described.

Catalepsy shows its symptoms by headache, dizziness, buzzing in the ears, broken sleep, extreme irritability and other symptoms of nervous derangement. The patient remains motionless as a statue in the attitude in which he may happen to be at the moment of the attack. During the fit, consciousness and sensibility to external impressions are either entirely suspended, or else, though the senses may be retained, and though external impressions perceived, the patient is unable either by word or act to give any sign of consciousness. The respiratory movements and beat of the heart and pulse are usually so feeble as scarcely to be preceptible. Generally speaking such fits only lasts a few minutes, and very seldom for several hours or more rarely for days. When the patient has passed through the fit he yearns and sighs like a person just awakened from a profuse sleep. Between the fits the patient enjoys good health unless there is complications. Recovery is the most frequent termination of single catalepsy. The dread lest cataleptic patients should be buried alive has become exploded in modern days.

It is very seldom that cramps cause death, and they have not the tendency to shorten life, even if they occur at frequent intervals. It

is the cause of cramps, which leads to death. Such as poisoning, bleeding, asphyxiation, and mostly temporary emptiness of the blood vessels in that part of the brain, presiding over the affected location. The tendency to cramps can be located in all parts of the body. It is a well known fact, that tape worms have been the cause, wounds of different kinds and foreign substances in the cavity of the ear.

You have now learned in this mental trip through the human body how symptoms of disease appear in the different organs composing same and also how they originate. We have considered the organs of nutrition so necessary for the preservation of our health and capabilities, as well as the organs in which the unknown resides and presides over our matter. By the careful study of these lines, you will acquire a knowledge, which will serve you in the noblest of all works, the alleviation of sufferings of those dear and near to us and mankind in general.

To study the mind, the body and the two combined will leave you, when abnormal changes and derangement in their functions exist and that constitutes *disease*.

GENERAL RULES IN NURSING AND HEALING.

We have learned how the body tries to protect itself from the changeable influences of its surrounding and how we can expect protection to the body, by the exercise of the mental capabilities.

Of all created beings, man is the least provided with natural weapons in the battle of existence. He has no feathers or densely hair covered skin to defy inclement weather; nor can he create with his teeth, or other natural weapons, a respect or fear in his co-creatures. He has invisible weapons, his soul, his mental faculties, and these give him power over all.

Man cannot always reach his aim, by the exercise of his own individuality, he must utilize the thoughts of others and thus reach in unison with others his object. And under this rule man will learn, while in health, to prepare himself for his own good and those of others, how to act in sickness. Talent is often born in the human being, but oftener acquired—and especially the talent of nursing partakes the least of a hereditary nature. It has to be gathered, not only through practice, but mainly through the acquisition of the knowledge of the body in state of health and disease. The latter prepares and the former puts on the finishing touches in an accomplished nurse. Therefore read and prepare yourself for the time when you

have to practice, for nature in its course will not wait, till you acquire the knowledge so needful to help the sick.

Women in their calling are nurses. Their bodies are the perpetuation of life, by bringing into world their offspring, which in the first nine months is a part of and in them. From them young life receives its nutriment. The highest aim of the mother should therefore be to keep herself in health and to learn how to regain it, when lost. Her health is the health of her children, in whom her life is perpetuated. To accomplish all this, woman needs strength, in order to develop others and to care for those, who look upon her as the fountain head of life.

According to her best understanding the mother will protect her children and stimulate through her virtues, the father to provide means, and when sickness comes, or even worse, the last summons, the husband looks to his wife, children and to the mother for succor. She suffers with her dear ones and gives such relief as is at her command.

Such being the case, it is evident, that women are better nurses, their sympathetic natures obligate them to assist in sickness, even in cases where no kinship exists.

Even a child unable to complain, or a husband not desiring, the mother and wife cannot be deceived, when those surrounding her are sick. Even the faintest signs, such as loss of appetite, gapping, sighs, disturbed sleep do not escape her attention, and she need not be told that her dear ones are sick by the more aggravated symptoms, such as chills, fevers, etc.

Mothers will save themselves many hours of anxiety and multitudes of care, if they acquire a knowledge of the symptoms of disease and how to combat them. Often her baby, afflicted with only a temporary indisposition, for want of a knowledge and comprehension, will cause untold agonies in the mother and her mental sufferings are far greater than the physical ones of her little darling.

Every nurse should be able to observe the present condition of the organs, of mental activity, of sense, thought and action, the height of fever and the examination of the organs of nutrition, respiration and locomotion. This knowledge will lead her then to action, with a view to ameliorate the sufferings of the sick and effect a cure; or in aggravated cases to call in professional aid.

The mode of life of the sick must, pre-eminently, be a simple one,

in order that the body can collect material for the replacement of the wastage of disease.

The arrival of disease always causes an inconvenience and comes at a time when we have other things to do for our bodies. We must deny the anticipated enjoyments which we have dated, when this unwelcome guest enters our body, we must refrain from work in most cases, simply for the reason that all the nutrient parts of our blood are required to restore health—and that takes precedence over pleasure and work. If we violate these rules or allow our children to do so, nature will take its revenge. Carelessness in providing proper care and medicine, and the hope that disease will pass away without these, has mortified many a father and mother and the tears they shed over the grave of their child were of remorse mingled with those of grief.

It is in the beginning of sickness, that the body should be withdrawn from further deleterious influences, and our attention be directed to the removal of the cause of the disease.

Hence, one of the first principles in nursing, is not to ask of the body work, of a mental or physical nature, but to furnish to it, all needful things, which will strengthen or rebuild, weakened or lost parts. In disease, the tissues waste quicker than the ordinary functions can replace same.

The nurse must judge, aided by the theoretical and practical experience, and from observation, as to the health, and the capabilities of the body, also what results are obtained, good or bad, from the food he eats; the air he breathes and the occupation, either mentally or physically.

A sound body can undergo a great many diversifications, without injury to health or capabilities, but this is not the case with the sick. You may eat a hearty meal and through the activity of the body digest it in proper form, but when the body is sick and cannot take part in physical or mental work, you must not be tempted to force nature and abstain from placing food in his digestive apparatus, which it is unable to digest. Hence it is the duty of the nurse to step in and regulate, for sick people, who are, owing to their ailment, incapable to discriminate.

Nursing and treatment go hand in hand, and, in fact, are two inseparables, for without either the results are poor.

The Diet. The diet of the healthy must conform to the age, sex, the climate we live in, and the occupation. The only occupation of the

sick is that to get well, the climate is regulated according to circumstances by means of bed and sick chamber. The bill of fare, however, cannot be written in one recipe, and changes with nearly every sickness.

It is natural that the sick need the same nutriment as the healthy, but if the body does no work, as is usually the case with the sick, the quantity need not be so large and this is specially the case in the matter of fat. In nearly all diseases, the digestive apparatus has difficulty with fats of all kinds, such as steaks, chops, etc., fried in lard or butter, soup with fat on sauce, or plain every day butter. Many of the diseases cause an aversion against anything fat and in the patient numerous sensations which are manifested in hiccups, heartburn and an oppressed feeling in the region of the stomach. Fat, however, is one of the principals, through which our body receives warmth, and nature has provided us with a substitute—sugar, or those nutrient articles which change through the process of digestion into sugar. The ratio as to quantity does, however, differ; then for 10 units of fat, the body needs 17 units of articles producing sugar. From it, it will be seen, that the work of the digestive apparatus, by this substitution is considerably increased and, therefore, we can not rely upon the substitute whether it will furnish the requisite nutriment for the purpose. One of the main substances which the body needs in disease is albumen, it is the material needed to rebuild the lost tissues and which prevent the collapse of our soul's abode and for this purpose, best adapted, is egg food, properly prepared, and the soups, made of bone and veal knuckles, properly freed of all fats.

In fevers fat and sugar or sugar creating substances must be entirely avoided as they will increase the heat of the body, thereby heightening the fever. In the latter the body assumes great quantities of moisture, in proof of which observe the nearly unquenchable thirst.

Appetite exciting condiments such as pepper, mustard, horseradish, catsup, all the hot sauces, while stimulating the stomach and intestine and bringing them to activity, have a too strong tendency to excite unnecessarily the nerves with which they come in contact. And as the nervous system, especially in fevers, is subjected already to more excitement than good for the health, these ingredients in their reaction will cause a collapse of the nerves for the time being. Hence those articles do much harm and must therefore be *entirely* eliminated from the dietary list. These condiments are only useful in health in the

stimulation of the digestive apparatus and then only when used moderately.

To create an appetite, either when in health or sick, by taking alcoholic liquors of any kind, cannot be too strongly condemned, as its effect upon the mucous membrane of the stomach is a paralyzing one to the peptic glands, and shuts off the flow of gastric juice. A false appetite is, however, created by the irritated condition of the stomach and it cannot commence its function of chymification, till it has recovered from the alcoholic effect. Hence we carry a dead load in our stomach and thereby weaken it to the detriment of the whole system.

Through the diet in sickness, we can also, to some extent, regulate the stool, a matter of the greatest importance. The effects of the different dishes vary so much with the different constitutions that it would be impossible to treat the subject satisfactorily. In some milk facilitates in others it obstructs the stool, while in some, it has a tendency to form phlegm, and some claim for it all sorts of beneficent virtues. It is further to be recommended, not to listen to all the dietary remedies your good neighbor may suggest; they may have done good in their cases, but with your afflicted may have a direct opposite effect.

In general the composition of the diet for the sick should be rich in albumen, to rebuild the tissues, and especially water should form the bulk, in order to facilitate assimilation and avoid work for the organs of digestion. They should contain very little sugar creating substances, no fat and little salt. When you meet with evident loss of strength, resort to beef tea and *pure* wine, being specially careful with the latter.

Inasmuch as in all diseases the digestive apparatus is more or less weakened, the food must be prepared so that it can be easily assimilated.

Consequently nourishment is best served in the form of soups, graduating its consistency with the stage of convalescence, till in its latter period you can resort again to solid food.

Large quantities of food require a corresponding tissue for its digestion, which requires power. The sick, not having a surplus of it to spare, in its weakened condition, must take small meals, at shorter intervals, and thereby give an opportunity to regain the power expended.

The cleaning of the mouth and teeth, as well as slow and perfect

mastication, must be insisted upon in all stages of sickness.

In cases of fever give only plain liquid food to the patient, warm and solid nutriment is distasteful to him, and has a tendency to elevate the temperature.

You cannot always comply with the wishes and desires of the sick in dietary matters. The nurse has to regulate that for him, then, when sick in body, he is usually mentally incapacitated to select for himself the food best adopted in his case. Give you rsick such a variety of food as may be consistent, monotony of diet will spoil his appetite and he will refuse food entirely. In high fevers meals must be frequent but small.

Always respect the sleep of the sick, no difference whether day or night, and do not interrupt it with meals. A little refreshment of some nutrient substance is always welcomed by the sick when they awake at night, give it to them, when asked for, or if long without food, urge it upon them gently. Fever is always highest between five and six, p. m., and as food increases warmth of body, never give it before that hour, as it would aggravate the fever. Warm food must at this time be especially avoided. During the night the temperature of the body usually falls and does not increace preceptably during the morning hours, hence the propriety of giving food during this period.

Care must be taken, especially in fevers, that the patient has at least once a day, a passage. Accumulation of excrement in the bowels increases fever rapidly. If possible regulate the stool by means of diet, such as stewed, fresh and dried fruit.

The best nourishment in fever is milk, buttermilk, well beaten white of egg, seasoned with a little sugar and salt. Such diet is, of course, only fit when the patient has ample strength. For grown people the above may be taken in connection with some dry toast.

Gruel or porridges of flower, meal, farina barley and the other numerous creals are better prepared with milk and an egg stirred in than with water. Oatmeal, barley, rice, should boil at least two hours under constant stirring, or prepared in a steam pot. They should always be strained through a fine sieve or gauze cloth.

Very tasty and refreshing are the fruit soups for the sick; their value consists in the refreshing qualities and not in the nourishment they contain. Equal to these are the home-made jellies. Almond milk is a great tonic in cases of fever, but must be partaken of, in small quantities only.

In loss of strength resort to beef tea mixed with fresh milk and egg. The meat extract, now to be found in nearly every grocery, aids greatly in digestion. It is more of a tonic than a nutriment. Tea and coffee can be used in most diseases, but cocoa and chocolate must be entirely eliminated from the dietary list.

In some diseases, where loss of strength is so rapid that it cannot be rebuilt by the ordinary means of food, we must resort to wine, but it should be done under the direct supervision of the family physician or a trained nurse. In such cases, purchase only the very best and the brands known as Tokay, Malaga, Madeira, Port, Sherry and champagne are best fitted. In this connection it may not be out of place, to warn against the purchasing of these wines at a saloon; the majority of wines dispensed at these hell holes are only imitations, and consequently are deleterious. There are exceptions, however, to this rule, and one may find in these places wines fit for medicinal purposes, but it is an exception. The drugstore which is known to sell pure articles is the place to be resorted to as a rule. Wine, whenever prescribed or taken in cases of sickness, should always be administered in very small doses and under no circumstances more than a table-spoonful at one time. This, of course, refers to adults. Children's diseases usually can be treated without this medicine.

The diet for convalescence is, in its first stage, also best in the form of soups, and as it progresses, the more solid forms of food may be used again.

In order that the mother or nurse may not be bothered with thoughts as to what to give and prepare for their afflicted, a brief list of nourishing dishes and the mode of preparation is added here, and from it a sufficient change can be selected.

OATMEAL PREPARATIONS.

Boil meal free from all dust and flour in water for two hours, either in a steampot or under constant stirring, keeping in it sufficient water that it remains a fluid mass. When perfectly done strain through a fine sieve, add a pinch of salt, and let the sick drink of same, either warm or cooled, but never ice cold. If they like the taste add some granulated sugar and lemon juice, which makes it to some a very palatable drink. Instead of using water to thin the gruel you can also use fresh milk and this is especially to be recommended in cases of fever.

Barley, hulled wheat, hominy, and grits generally can be prepared like oatmeal.

LIQUID BREAD.

Take two or three slices of toasted wheat bread of a nice even yellow color, without scorching same, lay it into a deep earthenware dish, allow gradually to cool, flavor with a little lemon juice and sugar; strain.

Or boil one pound of stale white bread in three pints of water one hour, strain through linen cloth and season as above.

APPLE DRINK.

Peel and carefully core 5 or 6 perfectly ripe apples of a quality best suited for cooking purposes and put them to boil with one quart clear water, using earthen or enameled iron vessel, cover well and allow to simmer one hour, strain all juice through linen cloth, allow to settle, and add four ounces grated bread, or toasted bread crumbs, eat either cold or warm, in latter case heat the juice before adding the bread.

FRUIT WATER.

For a pound of fruit of any kind, freed of seed, take one quart pure water, let it come to a boil, strain and add eight ounces granulated sugar, filter carefully and keep in a cool place. If you make this preparation of strawberries, add the juice of one lemon.

STRENGTHNING DRINK.

Take parched barley or malt and boil in water, adding two or three bread crusts, sugar to taste, and flavor with jelly or fruit jam; strain carefully.

Another. Take the yellow of one egg, beat it for fifteen minutes with powder sugar and add to it one-half pint of either boiling tea or milk, doing this slowly under constant stirring. This is a good drink in cough and cold, also for those suffering with consumption.

ALMOND MILK.

Peel one-half pound sweet almonds, grate them, or macerate them in a mortar, add to it one quart pure cold water, stir for 10 or 15 minutes and strain through a fine linen or cotton cloth. It does not keep over 24 hours and is best when fresh.

LEMONADE.

For a water glass full, *peel* one lemon and extract the juice, mix in

with a heaping tablespoonful of powder sugar till sugar is dissolved and fill glass with cold water, strain, and drink through straw or glass tube.

FRUIT LEMONADE.

Take strawberries raspberries, currants, cherries, or any other fruit and extract all the juices from it, add sugar, a little chipped ice and water, mix well, and use as lemonade. Always make fresh if you make for more than one or two drinks, boil the fruit juice to kill the fermenting germs.

SOUPS.

Take the lean meat of either beef, mutton, veal, old chicken, or pigeons, or if you can get them, young rabbits; chop the meat medium fine and put to boil with cold water, skim carefully, add boiling water as may be deemed necessary, add a pinch of salt, a piece of carrot, a small onion, a sprig of parsley, but no spices; boil till meat is nearly dissolved and strain. Put such quantity of this broth as your patient may need in a separate stew pan and bring to a gentle boil, and add to it one egg, well beaten, and see to it that the egg does not curdle. A tablespoonful of fresh cream also helps the soup and the patient. The above is very nourishing.

When making this broth for a convalescent, add to the meat a veal knuckle or a beef soup bone, otherwise proceed as above, but be careful that the soup does not contain any fat whatever. If the digestion of the sick is fairly, the soup may be thickened with well boiled rice, barley (must be strained,) farina, home made noodles, sago or tapioca. It is well for rice or barley to be soaked for 8 to 10 hours and then boil them to a jelly.

Soup is surely the easiest article to digest and as all invigorating and strengthening principles can be incorporated in same, it should, above all things, be the form of nutriment given to the sick and also in the first stages of convalescence.

In convalescence and in all diseases which are incurable, where it becomes necessary to build up or maintain strength, the semi-solid foods are in place.

Slowly made toast, without burning or scorching the bread and served with boiled cream or milk, or stewed in strong beef tea, or with the addition of a soft pounded egg, is good food. Do not use butter, at least not in large quantities in the different toast prepara-

rations. Always use yeast bread, which has been baked at least twenty-four hours.

Raw beef, scraped with a dull knife, so that all strings and sinews are removed, adding to this mush of beef one yolk of egg, salt to suit and a few drops of lemon juice. This well mixed spread on toast is not only palatable, but also strengthening. Some people, before becoming acquainted with this dish, have an aversion against raw meat of any kind and may be induced to eat it between two *thin* slices of toast. They will soon learn to take it and the aversion will vanish, when they see the good it does them. If you do not succeed with this device, do not try to force them to eat it, as it might produce vomiting, which is weakening to the system in these stages.

Stewed frog legs with white sauce made of cream and corn starch is a good dish for people on the road to recovery.

Tender beef steak (tenderloin, if you can procure same), lean mutton chops, veal chops, young chicken or turkey, nicely broiled (but never fried in grease) are the proper things, when in a state of convalescence. Season these meals with salt only, and use as little butter as possible. Always serve these meals on toast. Of the fish kind, all those which have scales may be used when broiled, or boiled in salt water but never when fried or baked in grease.

Raw and soft poached or boiled eggs are good food for sick and well people.

Of bread only yeast raised wheat bread made without shortening, should be used in the diet of the sick and mostly in the form of toast.

Vegetables of all kinds are injurious to sick people, and only tender spring vegetables fresh from the garden are admissible in the latter stages of convalescence. Potatoes must not be used at all in scrofulous diseases. These blessed roots aggravate that illness. In rheumatism, where the digestive apparatus is in good working order, eat as many boiled asparagus as you wish, make a whole meal of it, and probably your rheumatism will leave you without much, if any, medicine.

Dried beans, peas, lintels, are very nourishing to the healthy, but next to poison in sickness.

It is hoped that no reader of this book will give *pies, cakes, pudding, or any kind of pastry* to the sick or convalescent. It is poison to them.

In serving the meals to your sick, great stress should be laid upon the matter, how it is served.

1st. Cleanliness of food and the dishes it is served on is necessary to give your afflicted an appetite.

2d. Always make it tempting to the eye. Have your toast a rich yellow, your tea of good color and flavor, your cream sweet and fresh; the water crystal clear, even if you have to filter it through sand or felt; a clean napkin with every meal. If the patient has a liquid diet serve only a half plate at a time, or so much as you think he or she will eat, or even a little less. If they want more, be prepared to give it to them, but allow no gorging. In case meats are permissible, garnish the dish with a sprig of parsley or celery, or a few slices of lemon. It will sharpen the appetite.

3d. Always offer your sick, water after meals for cleaning the mouth and lips, so that they will not have the after taste too long.

4th. If the patient cannot get up for his meal, serve it to him in bed, make his position there one of comfort by propping pillows or blankets at his back. If too weak to do this, let him take his food in a recumbent position, in liquid form, administering it through a straw or glass tube, or in the shape of a nurse bottle. The latter mode of taking food is of much value where the patient suffers with much pain in bones, joints and muscles, where every little movement causes annoyance. Often this class of sick would rather be without food than undergo the torture caused by being moved and propped up.

5th. The meal must be ready to the minute when the sick expect it, if you fail in this the patient will lose his appetite.

6th. Under no circumstances talk to your sick while they are eating, and discourage their conversation during meal as much as possible.

7th. After meal, darken the sick room slightly and allow your sick all the quiet rest or sleep they wish.

The Sick Chamber. This should be the best room in the house and many a mother will sacrifice her parlor for this purpose, if she knows that it will contribute to the betterment of her sick child or husband.

To place a sick person in a sick room, when no direct air can get into it, or where sunshine, the light of life, can throw its beneficent rays, is a crime. In this enlightened age no one would think of building a hospital, where air and light cannot penetrate and for good reason. Therefore, if you have sick people, whose sleeping apartment are close and stuffy, remove them to a better place. Ventilate the room, even in the coldest weather, protecting the patient, while doing it, with screens or covering. Keep the temperature even between

63° and 65° F. Prevent any and all kinds of dust in the sick room. Have the room properly disinfected, at least every twenty-four hours, by means of a solution of sulphate of iron in water placed in a vessel under the bed. Clean the room twice daily. Have your eye on the stove, if you burn coal, that no gas is escaping. Smoke is also injurious.

As to atmosphere, a good many sick chambers can even to-day, be recognized by means of the nose, instead of seeing the sick. Prevent the bad smell by ventilation, cleanliness and disinfection. If the air becomes too dry, evaporate some water in room, do so also when too warm. This is especially necessary in lung diseases.

Bed and Clothing. A hair mattress, or in its absence one of moss or corn husks is the best, covered with an old but clean blanket and cotton sheet. For covering next to body cotton sheet in summer and woolen in winter and such number of clean dust-free woolen blankets or spreads as may be necessary, constitutes, with feather or hair pillow a good bed for any sick person. The bedding should always be scrupulous clean and be aired every day. Warm them before allowing their contact with patient. As body clothing a long woolen or cotton night gown serves its purpose best. Never use covering or clothing to such extent as to cause perspiration. Never keep the stockings on patient while in bed. Always tuck the covering down to prevent draught. Change night gown and sheet twice a week. Bedding and clothing soaked with perspiration, blood or pussy matter is poisonous to the sick. Have the room in proper temperature and doors and windows closed when changing the bed clothes.

Wash your sick three times daily and do not neglect to comb the hair.

To regulate the *occupation* of the sick is about the hardest job for the nurse. The old theory for the sick to occupy his mind with nothing and get well in consequence, is blasted long ago.

Many sick do not need or cannot partake of any occupation or conversation and pass their time in a comatose state; it is these, however, who need the most careful watching. Has it not happened, that the patient died without the knowledge of his nurse? To such sick you must offer nutriment at regular hours, moisten their mouth and lips as well as nose, and allow them to smell on a rag soaked in much diluted vinegar. See to their stool and urinating. Watch that they do not become bedsores. Do not raise the head too high. It

will facilitate the flow of blood to the brain. Do not allow the patient to bury his mouth and nose in the pillow, it obstructs breathing. Do not allow any noise about the sick chamber, it will irritate the patient. The pushing of chairs on bare floors, the slamming of doors in house, squeaking of doors, rattling of windows, flying about of shades and curtains, all lead to a like tendency. Do not show anxiety on your face, have no whispering conversation with any one, not even with your patient, as it strains his ear nerves; it is also liable to raise distrust in the mind of the patient as to his condition. The noiseless walk of the nurse, the apparent endeavor to be more than attentive towards the patient, brings hallucinations to his mind, which bring no good.

If the patient desires to converse with you, show him always your face, in a sitting posture on a chair adjoining the bed, as this prevents the cramping of his neck, should you stand alongside of him. Never sit on edge of the bed, as your weight on same, cause disagreeable movements to the patient. Give all possible information to your patient, but do not sympathize with him, as he might imagine himself in a worse state than he really is. In the administration of medicine be firm and prompt and do not listen to talk of bad smell or taste of same; else, through kindness of word and action, you increase the mental sufferings of the patient. Never allow your charge to become impatient; always soothe him with kind words, when you have to leave him for a few minutes.

As the patient regains strength, the work of nursing and watching becomes easier, but even then we must not leave the stages of convalescence to his judgment. He will mistake signs and try to force his convalescence; he feels strong in bed and wishes to leave the same and does not consider how he saves his organs, by their inactivity, in bed. In bed he can keep the normal animal heat a great deal easier than out of it, and even in a warm room with warm clothing, the ill signs of a chill will appear, and the patient will sink lower than he was during any stages of his illness. The rising from the sick bed should be gradual, short spaces at the beginning, and be increased in proportion as the wasted body regains strength.

Especially after child birth, when the young mother imagines she has regained all the strength lost during her confinement in bed, and is anxious to rise, she becomes dizzy and falls into a swoon, as soon as she is raised up. Be careful; grim death is only masked by the child bed fever, and is looking for a victim.

A great many sick, when weak in body, imagine unimpaired mental faculties; this is often the case in the first stages of convalescence. For this reason, the nurse, by word and action, must omit everything which might give rise to mental excitement. Real mental work must only be done by the healthy. The patient should only be allowed to read in bed, where he can be bolstered up, and has the best of light. Reading to a patient must not be too long at any one time. As to the quality of the literature, it should only be of the most moral tone, and nothing be in its contents which calls forth mental digestion or deep reflection. At sleeping time the patient should not be molested with unnecessary kindness and be allowed to collect his thoughts preparatory to a good night's rest. A useful and agreeable occupation for the sick is the looking at pictures of all kinds.

The real useful nurse is always more influenced by the signs of the disease than by the wishes and exclamations of the patient, and one who becomes confused in her judgment by the latter, is a bar to an early recuperation of the patient. The nurse's head must remain as clear as that of a General in a battle, she must not waste her strength. The display of anxiety and care has never saved the life of a patient, but a jovial temperament and a hopeful face, have fooled death oftner than once.

Regulating the stool. This needs special attention and many a time symptoms of disease make their appearance, which scare the whole household, and in reality nothing is the matter with the patient but constipation. So when you find that you cannot regulate the stool by dietary means, resort to rectal injections, by means of a syringe, first using luke warm water, if that does not bring it, add a little pure castile soap to it. If the patient has pain in rectum, or ulceration, use thinly boiled starch for the glyster, it has a soothing and healing effect. In adjudging the nozzle into the rectum be always careful and wash it first with a little carbolic acid, bottle No. 5, and then grease with some vaseline, bottle No. 14. Let the fluid ascend slowly into the rectum and keep it there as long as possible to give the water a chance to dissolve the putrid, solid mass lodged in the large intestine.

Soap plugs are very useful to hasten the stool; take of common white laundry soap and whittle a piece about three inches long and of the thickness of a pencil, lubricate it with some sweet oil and insert it into the rectum. In the average case it is infallible.

When a patient is too weak to go to the closet, or cannot assume

the sitting posture necessary in the use of a night vessel, you must procure the wedge-shaped bed pan, warming it gradually, and shoving it gently under the sufferer. Never be neglectful in this duty, and while perhaps disagreeable to some, consider it a duty you owe your fellow being, and that at sometime you may be in a position where you need like service.

In a great many diseases, where your knowledge of the case is not sufficient and you need the experience of the family physician, it will be necessary to examine the urine, and in such case always have the patient use a glass if he can sit up to do it, and if not able use a large necked white glass bottle. The latter will also be necessary for ordinary urinating, when the patient cannot undergo the exertions incident to the use of the chamber.

In the *administration of medicine* be careful and see that the patient does not lose half of it. The tea and table spoon are good measures, but not so well adapted for the administration, a cap is preferable. Liquid medicines containing iron or other injurious ingredients to the teeth, should always be taken through a straw or glass tube.

Powders are best taken dry and washed down with a swallow or two of water. If taken in a wafer, roll the powder in same, moisten the wafer, place it in a teaspoon and swallow with a draught of water.

Inhalations of vapors should be made over the vessel containing the medicaments.

Ointments should be well rubbed in and in case the patient is sore, spread the preparation upon a rag, about the thickness of the back of a table knife and apply it like plaster.

Plasters should only be stuck on the body after carefully washing and drying the afflicted parts.

Washing, bathing and the rubbing down with course towels is a good thing for patients in nearly all stages of disease, and keeps the skin clean and fresh and in a measure replaces the exercise the body is otherwise subjected to. The gradual use of cold water on afflicted parts will strengthen them and prevent the taking of cold, when the patient leaves the bed or goes out. His body has through these washings become hardened and fortified.

These ablutions will not only excite to activity the skin, but also the respiratory organs, the actions of the heart, and the nerves. It also exercises a secondary influence upon digestion.

When patients cannot partake of any bodily exercise, it is well to

resort to *massage*, as it replaces in a measure the activity in a healthy body and so needful to it. Massage is a kneading and rubbing of a body by means of hands and in doing so, the operator should always lubricate his hands with a little vaseline, bottle No. 4. Massage is very good when the blood is not in a healthy state of circulation, or when the patient is bothered with wind in the abdomen. Commence gently and increase your activity as the patient becomes used to it. He will soon learn to like it.

Active and passive gymnastics are of value to the patient and have similar effects as washing and massage, only differing that the person performs the operation himself. The raising of the body by using arms as props, voluntary turning in bed, kicking with legs, or rubbing and clapping of the hands, all have good consequences and bring the sluggish blood and nerves into activity.

The patient can do nothing better for himself than exercise his lungs, by deep breathing of pure fresh air, and if he does it not of his own free will, he should be asked to practice these lung gymnastics. He and you will notice, after a little practice of this kind, that sighs, gasping, and the consequent anxiety of the surrounding friends will vanish, the appetite of the lungs having been satisfied. The inhalation of pure fresh air in large quantities, in fact the gorging of the lungs with it, will also have a tendency to drive away the pale complexion, the cramped convulsion of the face, the dullness in head and restore the lustre to the eyes.

Disinfection is a matter of necessity in the sick room and is best done by pouring a few drops of carbolic acid, bottle No. 5, into a vessel containing boiling water. The vapor of it will do the work very effectively. After a patient has left his sick room, it is always advisable to burn a little sulphur, Bottle No. 15, in the room, having all doors and windows properly closed and allowing these sulphurous vapors to penetrate to any and all parts, by which, germs of disease, if they are in existence are killed. During this process the bedding and clothing of the sick should remain in the room and be dusted and brushed after the sulphur bath.

Articles of little or no value, having been in use by the patient, should be burned.

The clothing of the sick, before being mixed with the family washing, should be well boiled in soap and water.

Always disinfect the water closet with oxide of iron or carbolic

acid, never use chloride of lime, as its fumes are hard on the lungs. In case you have no sewer connection, you can use ashes and sawdust or sand moistened with carbolic acid in the disinfection of closet vaults.

Chamber vessels, urine bottles and glasses, cuspidors, or anything used as a receptacle for solid or liquid excrements, should be cleaned thoroughly at least once every day, and a little lye, be used in doing so. If spittoons are used containing sand or sawdust, put a few drops of carbolic acid, bottle No. 5, in the same.

In disinfecting the chamber vessel be careful to wipe the rim so that all acid is removed, as the contact with it to the sexual organs is irritating.

If you have a corpse in the house be watchful that the undertaker uses proper disinfectants, and if he neglects call his attention to the matter. If the funeral director understands his business he has proper ingredients at hand to cause the necessary disinfection of the corpse and its surroundings. The room where a corpse lies preparatory to its burial, should not contain any furniture, as it might be the conductor of germs to others. After burial the room should be carefully sulphured, aired before it is used for habitation.

The *Effect of Medicines and Remedies* applied must be observed, and no rule can be construed which would be applicable in general. When medicine has been administered we have a right to expect betterment in the condition of the patient, but if we fail to notice any improvement, it is not a sign by any means, that the remedy applied has not done its duty. Different causes may obliterate the beneficial effect and the main of these is a wrong diagnosis of the diseases, and it is especially necessary for this good reason, this good reason, that any one, becomes thoroughly acquainted with the human body before he attempts to alter its functions.

Another reason is impatience, or to expect good results before due. Remember that the majority of medicines taken internally are brought to action by the blood and that takes time especially so, when the assimilation is of a slow nature.

Diseases.

THE ORGANS OF SENSE.

THE EYE.

ITS CARE: It consists mainly in not using the eyes when we notice the least difficulty with these organs. To forestall this, is to use the eye, but not misuse it. When you use your eyes till they pain or burn, you hurt them, and this you will find to be the case in diseased eyes at an earlier period. As soon as you notice any tiredness, your occupation must be changed, when the eyes will not be called upon to do any work. Also long duration of use of eyes in fine work, reading by bad artificial or twilight will weaken your optics very rapidly. The light you use should not be too strong, but sufficient to distinguish at ease fine delineation. The position of the head must facilitate the flow of blood to this organ and when you bend sideways or forward too much you will cause an interference. Costiveness, the use of alcoholic or malt beverages, strong tea or coffee have influences derogatory to good sight and must be eschewed in eye troubles. Pure air, free of dust and smoke, is essential for the preservation of the eye. A strong wind if direct into the eyes has a tendency to inflame them.

If your eyes are afflicted in any shape, do not bury your head at night in the pillows, or put such bandages over them that no air can get at them. Protect the eyes against too strong light by shades over lamp, or over your eyes. Those of green color are the best. If this will not darken the burning sensation darken the room you occupy.

Bandages for eyes in case of severe cold should be made as follows: Take of old worn linen, strictly clean and free of starch, and cut oval pieces about the shape of the eyes, and large enough, so that the edges just touch the long projections surrounding the eye, moisten

the rag with *pure* water and lay it over the closed lid, than fill up the cavity with clean cotton fibres or linen shreds, cover the whole with a square piece of linen from the eye brows down to the root of the nose and fasten the whole by a thin gauze bandage around the head. This bandage should be changed every twelve hours.

If your eyes cannot endure the sharp sunlight, wind or dust use blue or smoke colored gaugles with wire gauze at sides. Use these glasses always in the shape of spectacles and not by means of fastenings to the nose.

If you use glasses habitually or temporarily see that they are clear and free of stralets.

The best medicines for the external applications are clear watery substances and a bandage. Never use salves or oily medicines for this purpose, they become rancid and gather dust.

Eye poultices can be applied cold, luke warm and hot, as the circumstances may require. Ice is best applied mixed with salt, in a tight rubber bag, or pig's bladder. If you use rags for this kind of poultice, leave out the salt. When poultices are necessary the patient should lie in bed or at least on a lounge. To apply poultices and keep them in place by holding, is more harmful than good.

When tears, mucus or pus run from the eyes remove the poultice instantly to prevent spread of inflammation. Bathe in such cases the eyes and surrounding in luke warm water and dry them carefully after the ablution with a clean towel. After drying apply a small quantity of vaseline, Bottle No. 14, and keep out of the dust.

Swelling of the Lids. Liable to happen in tooth-ache and eczema, is of little consequence, bath the lids frequently in cold water, keep out of draught and dust, and do not use the eyes at all. Too much light is harmful. In scarlet fever, the eyelids are usually swollen in the morning, but will leave during the day, it is a sign, however, of inflammation of the kidneys. In such cases gather the urine and submit it to the family physician for analysis and follow his course.

Sty, forms on the edges and mostly at the ends of lids, and consists of an inflamed swelling or boil. Usually a number of these small abscess form one after the other and must have their course.

Treatment. Clean carefully the edges of lid and moisten by means of a camelhair brush, or very soft sponge, the affected parts with

one part of 10% carbolic acid, C. P. Bottle No. 5,
ten parts of pure rain or strained well water.

Apply about every 3 hours, give a special cleaning and application before retiring. Keep out of wind and dust, and do not bandage the eye.

Inflammation of Lid Glands. The edges of lids become red, around the lid, hair or lashes form yellow crusts, in aggravated cases little pits form on edges of lid, the hair or lashes are bent; causing irritation to the eye; and fall out. Swelling of the lid from the inside, turns the edges up causing irritation of the eyeball.

Treatment. Same as sty, and pull out all hair coming in contact with eyeball, and wear blue or smoke colored gaugles.

Paralysis of upper lids and difficulty of closing same, is an important sign in nervous diseases and will mend with the recuperation of the nerves.

Treatment. Rest, cold washings, and a nerve strengthening diet. Coffee, tea, alcoholic liquors, tobacco must be abolished. Much exercise in open air with no mental exertion.

Cramps of the Eyelids, is a sign of overwork. Wash your eyes every hour in luke warm water. Take a rest and prevent the entrance of foreign bodies.

Involuntary flow of tears, is a nervous weakness of the tear ducts and sometimes accompanied by inflammation. It often happens in cases of nasal catarrh.

Treatment. Same as in case of sty, frequent washing. Use no coffee, tea or liquors. Leave off smoking.

Squinting is a disorganization of the muscles moving the eyeball.

Treatment. To effectively cure requires a careful surgical operation and our advice is to consult a first-class oculist.

Catarrh of the Eyes. Consists of reddening, swelling and heat of the inner mucous membrane of the lids and can be best seen, by pressing against the under portion of the lower lid and looking into the cavity formed between eyeball and lid. It commences with a burning and itching sensation, with formation of mucus and pus, which nearly closes the lids owing to the adhesion. Children thus afflicted will rub their eyes, causing increased inflammation. Strong light is painful to the eye. If not counteracted in season the inflammation may spread to the eyeball.

Treatment. Keep out of dust, in slightly darkened room, at an even temperature. Bath eyes every hour in luke warm water, and

prepare the following: Take 3 ounces white oak bark, next to tree, and boil in one quart of water to about one pint, strain till perfectly clear and free of all hard substances and till it looks like medium strong tea, add to this 3 teaspoonfuls carbolic acid 10%, C. P. Bottle No. 5. Shake well and saturate clean linen rags, free of starch and dust, with the mixture, and lay on the afflicted parts. The mixture should be of a temperature of 75° F. when applied. Use the rags only once, or if you run short wash them thoroughly before using them again. The patient is better in bed or on lounge, than sitting around on chairs. Usual diet but avoid fats, tea, coffee, and liquors of all kinds. Have a separate wash bowl for the patient, also sponge and towel. See that the hands of the sick are always strictly clean and that the finger nails are properly trimmed.

In the least tendency to *catarrh* or *granular inflammation of the eye*, Diphtheritis is liable to settle in this organ, by mere contact with the patient or receiving the exhalations of breath. Too much care cannot be exercised in attending sufferers with diphtheritis and often in the space of a few hours this contagious disease has spread to the nurse or surrounding friends, and by preference settles in the eyes. In such cases, the eyelids swell rapidly, assume a blue red color, become hard to the touch and matter is emitted from between the layers of the lid. The pains in the lids are excruciating and spread towards the forehead and temporal regions. Fevers usually appear. The eyeball being in such close contact will become diseased in consequence and little hope can be entertained to save the sight of the organ thus afflicted. If only one eye catches the disease close the other one and cover it up carefully with a bandage as heretofore described.

Treatment. Make a poultice of very finely chipped ice adding to it a small pinch of borax, Bottle No. 3, enclose the whole in clean linen rags and apply to afflicted eye. This will effectively check the spread of the disease, till you can call in professional aid. The fever does not require special treatment.

Bloodshot. Notwithstanding the dangerous appearance of this common disease, it is connected with no danger whatever, and will soon right itself if you rest your eyes and use blue eyeglasses for a time. It is painless and does not interfere with the sight. In children it happens often, when they have whooping cough, or in sneezing and vomiting. Apply cold water.

Foreign substances between lids and eye-ball cause excruciating pain,

which is much increased through the action of strong light, and, if the matter is not removed, may lead to cramps in the eye lids and inflammation of its mucous membrane.

Treatment. Attach a very small piece of sponge, to a stick or small quill, moisten it in luke warm water and sweep with it under the lids, till the cinder or whatever the object may be is removed. If pain still exists or irritation calls for rubbing, apply *cold* water poultices on afflicted eye. Young children, having foreign substances in their eyes, are usually very obstinate, and mothers can easily convince them with a firm kindness that something has to be done and while kissing the little one can slip the tip of the tongue under the eyelids and push out, without pain to the child, the matter therein lodged. The mothers, by their fine sensibilities in the tongue, will also know whether they have been successful or not.

Disease of the cornea is frequent and especially so in scrofulous children this disease has a tendency to obliterate the transparency of the cornea and thereby cause blindness, it is advisable to consult an oculist as soon as vision is interfered with and from apparent obliterations of the function of the cornea.

Diseases of the internal portion of the eye require special treatment by an oculist, not even the every day family practitioner ought to be consulted, but the best talent which you can reach, you will find to be the cheapest in the long run.

Flickering before the eyes, is often noticeable in fever, poverty of blood and rush of blood to the brain. It is an irritation of the optic nerves. The disagreeable feeling will vanish, as soon as the cause of it is removed, which you will find treated under their specific heads.

Color blindness is sometimes a hereditary disease, but more frequently it is caused by the minute nerve fibres which can not be excited to their proper function. It is simply a paralization of those nerves, which serve to distinguish color. There are no remedies which will cure this ailment.

THE EAR.

Its care. The first principle in disease of this organ, is to keep it perfectly clean, not only on the outside or visible portion, but also the auditory canal. This is best effected by means of a syringe and the use of lukewarm water with small particles of castile soap dissolved therein. Application of heat is also often necessary and this is best

accomplished by cotton layers. Medicine, if liquid is allowed to fall into the cavity by dropping and powder forms are blown into it by means of a twisted paper tube or goose quill.

In neglected disease of the ear, when pus comes in contact with skin of head and neck supuration is liable to set in. The places should be carefully washed with soap and water, the syringe should be used in the auditory canal, taking lukewarm water, adding to it a few drops of carbolic acid 10% C. P., which you find in bottle No. 5. This carbolic wash should also be applied to adjacent parts. After drying all afflicted parts, use a little vaseline on same. Bottle No. 14.

In ear diseases, the adjacent glands also become affected and frequently become inflamed and go into suppuration. Inflammation of the surrounding bones may also occur

1. *Bloody swelling* on external ear are painless and very seldom become inflamed.

Treatment Soak linen rags in cold water, wring them out and apply. When they become warm make new application.

2. *Frost bites* are of frequent occurrence. To prevent same put small particles of cotton in auditory canal and apply to external part a little vaseline. Bottle No. 14 or wear ear protectors.

Treatment. As soon as you notice that your ears are frost bitten, by being insensible to touch and rather rigid, apply snow or clipped ice, till they are thawed. This must be done in a cold room. Do not increase irritation by rubbing. Apply vaseline. Bottle No. 14.

Ear wax. It often accumulates to such extent that deafness seems to approach.

Treatment. Clean the auditory canal thoroughly by means of soap and lukewarm water, using for such portions as you cannot reach the syringe. Small particles of the wax become loosened and will be easily removed. Never use stick or hairpin. Grease internal ear with a bit of vaseline. Bottle No. 14 and keep cotton in ear for 4 or 5 days.

Foreign substances in ear. Insects and small hard substances. Peas, Beans or Corn, often placed by children in ear and cause swelling.

Treatment. For insects and small substances, use syringe and lukewarm water. For other substances place child on side, where afflicted ear is located. The kernel will gravitate towards the opening, then take hairpin, bend it slightly at crook, get behind the object with it, and

remove with a jerk. Another way is to get hold of the object with a pair of tweezers or scissors and remove obstacle.

After removal use syringe with an injection of

10 parts lukewarm water,

1 part 10% Carbolic Acid C. P. Bottle No. 5.

Pain in Ears. Occurs often and afflicts the whole side of face, it does not interfere usually with the hearing. The external ear is usually somewhat reddened and the parotid glands in front of ear become swollen.

The patient is usually very excited and appears to have inflammation of the brain. To touch, the sufferer seems to be slightly feverish. The pulse slow and irregular. In these symptoms use the following

Treatment. Take one good sized onion and grate it, and squeeze all the juice from the pulp add to it a like quantity of lukewarm water and 20 drops of carbolic acid 10% c. p., bottle No. 5, saturate cotton with the mixture and apply.

Catarrh of the ear is usually transplanted from the nose through the eustachian tube.

Treatment. Wash the affected organ with luke warm water and castile soap, using the syringe to reach the inner parts.

Discharge of pus from ear, is a sign of an aggravated disease of the hearing apparatus and can lead to complicated troubles, but if noticed and cared for in proper time, will yield to the following

Treatment: Keep the patient in an even tempered room of about 70 °, letting in pure air quite frequently. Clean the ear of all pus by means of luke warm water and castile soap, then make an ear wash as follows:

Pure luke warm water, 50 parts(say 50 teaspoonfuls) 10% carbolic acid, c, p., bottle No. 5, and of borax one part, bottle No. 3, mix well till borax is dissolved, and inject same, by means of a syringe, immediately after the cleaning process. Then take some dry borax, bottle No. 3, and blow it into the affected organ by means of a small paper tube, twisted for that purpose. Repeat four or five times a day. During intervals place a little cotton, saturated with arnica, bottle No. 12, in ear. Place on outer ear a little vaseline, bottle No. 14, also on neck if any pus should have fallen on same.

Dizziness of head, humming and buzzing in the ear. This arises from congestion, or too great amount of blood about the organs of hearing.

It may also be the result of nervous debility, and there is no relief but in the removal of these difficulties.

Deafness. If constitutional there is but little relief, even the most accomplished artists fail to rebuild an organ entirely destroyed. If deafness is caused by an accumulation of ear wax, proceed as explained under that head. If the result of cold or catarrh apply the following remedies.

Treatment: Keep patient in an even tempered room of about 70 °, under good ventilation; the best place for him is where there is no noise, or where he is not exposed to excitement, then take two good sized bulbs of garlic, or if you cannot get them, take one large onion, grate and press juice from pulp, add to every tablespoonful 5 drops of carbolic acid 10% c. p., bottle No. 3, and 5 drops tincture of arnica, bottle No. 2, mix thoroughly and strain through fine white cloth so that the mixture is free from all solid substances. Heat a teaspoon in hot water and by means of it drop 4 to 5 drops into each ear, closing the same with clean cotton. The mixture when applied to the internal ear should be about body heat.

The above is a specific in deafness caused from cold.

Temporary deafness, caused by catarrh, is usually relieved with the catarrh when it is cured.

All the complicated diseases of the ear should have the attention of a specialist in ear troubles.

Diseases causing the temporary elimination of *smell* and *taste* are symptoms of nervous diseases and not, as a rule, local affections of the nose and mouth. The troubles are deep seated and the nerves which preside over these senses are, owing to the diseased condition, unable to discriminate. These ailments usually cease when the nerves resume their proper functions.

The skin, as an organ of sense, often offers signs of diseases of the nerves, and this is the case when touch or sensibility to heat or cold is blunted. Among the symptoms which we have in these troubles are shivering, burning sensations and severe pain. Contractions of the muscles and cramps are symptoms of the more aggravated cases. In the beginning there is usually an increased secretion and flow of tears and saliva. Pain in the face occurs often of such severity that the patient becomes senseless and it has been known, where the poor sufferer was not carefully watched, that suicide has been resorted to. If these pains are not properly checked, they may migrate to the

brain and cause complication of diseases which are hard to control.

The most common form of nervous affections of the skin and muscles is known as

Neuralgia, which may be caused by taking cold, bodily and mental exertions, improper nourishment and general nervous debility. It may appear in nearly every part of the body.

Symptoms: In neuralgia we may distinguish two forms of pain. One continuous, increased by pressure and confined to circumscribed points in the course of the nerves; not very severe but annoying pain; the second appears in paroxysms, spreading from a point along the course of the nerve, the pain is terrible and almost unbearable.

At the commencement of neuralgic attacks we see occasionally that the skin becomes pale, and during the height of the attack, that it reddens.

In cases where neuralgia is caused from malaria it is of a temporary nature, otherwise it should be considered a chronic disease.

Slightly touching the skin, as in caressing the patient, often appears to induce attacks of pain more readily than heavy pressure does. Movements of the parts where the pain is located, namely, chewing when neuralgia is in the face, walking when in leg, and especially when the sciatic nerve is troublesome, coughing or sneezing when chest is affected, all excite attacks of pain. Mental excitement sometimes has the same effect. Each attack of pain usually lasts only a few seconds, but these short attacks are often repeated several times in the course of one or a few minutes, and then cease for a while so that in fact we may say, that in neuralgia long attacks occur which are composed of a number of short fits.

Neuralgia may continue for many years, except in the cases caused by malaria, or the so-called rheumatic neuralgia.

Care. In all neuralgic affections the patient should be extremely careful not to aggravate the already troublesome malady by contracting cold. Except in warm weather he should keep in the house and in bad cases, keep in bed. Special care should be taken, where the patient is indoors, to have the air changed and that it is pure at all times.

The diet of the patient should be one of the most nourishing character, and at the same time an easily digested one. Care must be taken that the afflicted has a regular stool, and in case of costiveness, counteract same by giving the patient stewed fruit, not too

sweet, at every meal lemonade, and allow him to suck a peeled lemon, oranges are also beneficial.

External applications, such as strong blistering, ointments, mustard plasters and similar irritants, should only be used when especially prescribed. When these remedies are used injudiciously they may cause inflammation of the affected nervous tissues, which would lead to greater trouble than neuralgia.

In neuralgia of the gums do not pull the teeth, it will help but little, and very often the wrong tooth is extracted.

Patients suffering with any kind of neuralgia are very irritable, often a fly on the wall will throw them into paroxysm. Humor them all you can, be their requests ever so unreasonable. They require rest of body and of soul, and the easier you make it for them to obtain it, the less will be their excruciating pain. Darken the room where the sufferer lies. Do not allow any kind of noise in the sick chamber, and see to it that it contains fresh air of an agreeable temperature. Avoid all stimulents and spices in the patient's diet. Remove from the sufferer all tight fitting clothes, and do not weigh him down with too many blankets or quilts.

Neuralgia having been caused by *malaria* succumbs easily to the following treatment: Give the patient at night one pill, cathartic comp. (vegetable); two may be given where stool has been very laborious for some days. Bottle No. 17.

Next morning after stool has been made give the patient one quiniæ sulphatis, 2 gr., bottle No. 16, repeating the dose every two hours untill 2 p. m. Avoid mental and physical excitement.

Sick headache, migraine. The symptoms of this ailment are difficult to explain, and it is even doubtful whether it belongs to the diseases classed as neuralgia, however it is universally done. It usually occurs in one side of the head, it often begins in childhood and remains till old age. It is not a permanent disease and attacks the body only at long intervals, showing a steady increase and diminuation of the pain, but never an instantaneous occurrence or disappearance. Perhaps in half of the women affected with nervous headache, the attacks occur at the menstrual period or immediately before. Some women suffer with it on day after attending reception, theatre, or other exciting occurrences. The cause of it is usually impediment in digestion.

Treatment: Keep in a quiet, darkened room, avoid all excitement and exertions, keep the bowels open, and if it cannot be done by a

diet of fruit containing acid, use a rectal injection of luke warm water and a little castile soap.

In case the malady occurs in time of menses, take two tablespoonfuls of green coffee (unroasted) and boil same in one quart of water, down to one pint, strain, cool and take, for two or three days before menstruation, or during same, every three hours, one or two table-spoonfuls of the decoction.

Neuralgia of face and back of head is of veary frequent occurrence. It is seldom caused by foreign bodies under the skin or tumors pressing against the afflicted nerves. It is usually caused by catching cold. It is seldom in childhood, but more frequent between the 30th and 50th years and more common in women than in men. The pain is intense and the attacks are often accompanied by a watery discharge from the nose. During the attack the face is usually reddened, the temperature increased and the pulse is very active.

The duration of the disease is seldom short, except when it is caused by malarial affection. Among the terminations besides, complete recovery, severe melancholia occurs, which may drive the patient to suicide. Death results very rarely from this disease. It may cause disfigurement of the face.

Treatment. Keep quite as described before, apply linen or cotton cloth saturated with ice water or chipped ice between layers of cloth. At intervals when pain is relaxing apply friction by means of a brush. See that the bowels are open and give of Pill Quiniae sulphates 2 gr., Bottle No. 16, every two hours till 2 p. m., never after that hour. Diet must be nourishing but easy to digest.

If above treatment fails give of Phenacetine-Bayer, 2 grains, Bottle No. 23, one pill every two hours, but not more than three pills in any one day, No case is known where two doses have not effected a cure.

Neuralgia in Chest, also called *intercostal neuralgia* is the morbid excitement of one of several spinal nerves, especially those, which, as intercostal nerves, pass along the upper spaces between ribs to the breast bone and along the lower spaces in the stomachial regions. It is one of the most frequent forms of neuralgia, and more in the female than the male. It often occurs after recovery from pleurisy and is often an accompaniment of tubercularis of the lungs. Women of a hysterical nature and having chronic womb troubles are also usually afflicted with this form of neuralgia.

Treatment. In severe attacks the patient had better retire to his bed, taking care that his room is well ventilated, without subjecting him to any draughts. If the bowels are open give one dose of Phenacetine Bayer 2 gr. Bottle No. 23 and apply to chest where pain is located the following preparation: Take a piece of new cotton flannel and spread on the side which has no fibres, a thin coat of tallow, or bees-wax mixed with lard, either will do, and the side where the nap is, take of oil of mustard, Bottle No, 12, and saturate the same, apply to afflicted part, covering well with a piece of flannel. Keep in position till the skin becomes considerable reddened, and remove. Apply gently to the reddened spot, a thin layer of pure lard or Vaseline. Bottle No. 14.

Irritable breast. It is doubtful in the world of science whether this disease is a neuralgic affection of the intercostal nerves, or of the shoulder bone nerves. Women, about the period of puberty, or from then to the 30th year, without any preceptible cause, become sensitive to the slightest touch at one or more points over the mammary gland. Severe pain occasionally shoots out towards the shoulder, axil or hip. It also happens that at the height of these attacks of pain, vomiting comes on. The patient cannot lie on the affected side, they are unable to bear the weight of the breast. The pain usually increases shortly before the appearance of the menses. The disease often lasts months, and in violent cases for a year or two without any preceptible change in the mammary gland.

Treatment. Apply gently a little turpentine, bottle 13, to the afflicted breast and wear any kind of soft cloth towards the skin, on the breast. Relief will follow in 6 to 8 hours. Keep cloth on the breast for 6 to 8 weeks.

Neuralgia in the loins (lumbago) and abdominal region.

Treatment. Same as neuralgia in chest.

Sciatica, or neuralgia of the hip, also called hip gout, is a neuralgic affection of the sensory nerves of the sciatic plexus or net-work of nerves and causes usually excruciating and lasting pain.

Among the causes of sciatica that leave no preceptible anatomical changes are excessive standing, suppression of habitual perspiration, and catching cold. It is quite natural that the latter should occur. Indeed, the majority of cases of sciatica are of rheumatic origin, as they result from exposure to cold of the skin covering, the sciatic nerve. It is not at all astonishing that the nerves most exposed are

the ones which catch cold easiest. So we have the face nerves, always more or less subjected to wind and weather, contract disease in the shape of neuralgia of the face, and that part which is necessarily exposed only for a short period, and usually under warm cover, is also easily affected when answering a call of nature and using a privy in which a draft comes from below.

Sciatic is one of the most frequent cases of neuralgia. It rarely occurs among children, is most frequent between the 20th and 50th years. Oftener in males than in females. People who can use well ventilated and tempered water closets are seldom afflicted.

The seat of the disease is the hip and down to the ankle; it rarely descends to the foot.

Sciatica does not begin with severity. It usually develops gradually and slowly attains its height. The patient is never free from pain, but complains of its constant presence, particularly in the hip at the point where the sciatic nerve enters the upper part of the leg. The pain often begins spontaneously, especially after going to bed; sometimes they are caused by outward pressure and movement of the legs. Even moderate tension of the muscles may have this effect, consequently the patient usually lies with his legs slightly flexed. Great tension of the muscles in coughing, sneezing or strangling, is often accompanied by severe pain. Be careful in walking, and place the foot of the affected side very carefully, because any quick motion or mishap usually causes severe pain. In chronic sciatica the limp which the patient favors not unfrequently emanates decidedly. In severe cases it may lead to paralysis.

Sciatica is a very obstinate affection. Even in favorable cases several weeks usually elapses before the disease disappears and it generally subsides as gradually as it develops. After the disease has disappeared relapse very readily occurs.

Treatment. Upon first noticing sciatica, the patient should be given a warm bath, then well dried and put to bed, with woolen blanket to lie on as well as for covering, cotton is next best, but do not use cold damp sheets of any kind. Let him take one Pill Cathartic Comp. Veg., Bottle No. 17, and after an evacuation of his bowels administer to him one dose Phenacetine Bayer 2 gr., repeating the dose of last mentioned remedy every four hours till relieved. In slight attacks, ten drops of oil of turpentine, Bottle No. 13, has a remedial effect, if not a curative one.

Neuralgia in shoulder and arm, is similar to sciatica and requires the same treatment.

THE BRAIN AND NERVES.

The thoughts and actions, other than normal are the symptoms by which we can recognize disorganization of the nervous system. It is different with diseases of the brain, than with other parts of the human body, for we cannot observe the changes taking place therein, the skull preventing it, so we have to be entirely guided by the actions of the body, which are controlled by the brain. The best places for the treatment of mental and nervous diseases are evidently the institutions for that purpose and which are within reach of all; private and public.

It is the treatment in either a sanitarium or asylum, in the earliest stages of aberration of the mind, that we can expect relief and permanent cure, it is therefore advisable to act promptly when we see such symptoms among our sick. It is a moral crime to suppress and endeavor to take care of your mentally deranged. The institutions for such purposes are well prepared to care for them and the sick should be so informed that there is the only place from which they may expect relief. The treatment in the majority of institutions is a humane one, and the stories one hears about straightjackets, chains, dark cells, corporal punishment. etc., are mostly emanations from a diseased mind. It is a rule nowadays to resort to the non-restraint system and the patient is allowed to enjoy liberty to such extent, as will not interfere with others. He is also induced to follow such physical and mental occupation as is best suited him and by means of kindness is made to forget his ailment, his diseased brain rests and does not indulge in the many hallucinations, his mind is being led away from them and out of chaos comes order.

Of course there are many diseases of the nervous system, which do not need treatment in hospitals or asylums, and these we will consider first.

Hyperaemia or Rush of Blood to the Brain. Is caused by increased heart action, from too slight resistance power of the blood vessels in brain, obstruction in the carotid artery, paralyzation of the nerves regulating the flow of blood, atrophy of the brain and enlargement of the blood vessels therein. Compression of the jugular vein. Coughing, straining; Blowing instruments; Impaired function of the heart;

and lastly the indulgence in alcoholic drink will cause it oftener than anything else.

Symptoms. Before considering the symptoms it will perhaps be well to warn against the widespread error, so injurious to the patient, of considering all cases of disturbance of the function of the brain as due to rush of blood to it, or the reverse.

Thus the disturbances which we notice in fever are not due to the increased flow of blood to the brain, from excited action of the heart, but depends partly on the high temperature of the blood in the blood vessels of the brain. Delirium and other severe brain troubles are most common in the debilitating fevers, in which much strength and power has been sacrificed.

Sunstroke does not depend on hyperaemia of the brain, induced by the action of the sun's rays upon the head. The symptoms of this disease consist in a paralysis of all the functions of the brain, occurring either suddenly or gradually. In the latter case the paralysis is preceded by excitement, delirium and other symptoms of cerebral irritation. It has been determined that the action of the sun's hot rays is not alone sufficient to induce these severe attacks, but that they only occur when individuals are subjected to great fatigue, on a very hot day, particularly, if, at the same time, they perspire very little, because they do not drink enough water and too much whiskey.

The symptoms of acute alcoholic poisoning as well as that from opium and other narcotics, do not depend at all, or, at any rate to a very small extent, on overfulness of the bloodvessels of the brain, notwithstanding the fact that they are congested.

Hyperaemia or fulness of the bloodvessels of the brain is marked by symptoms of increased excitability, irritation and depression. Usually the symptoms of irritation precede those of depression, and it is commonly supposed that this difference of symptoms depends on difference of pressure on the brain from the more or less distended bloodvessels. Is this pressure only moderate irritation and depression ensues, but if strong you will notice paralysis. It is probable that the symptoms of depression and paralysis arise because the requisite supply of arterial oxygenated blood to the nerve filaments and ganglia of the brain is limited or entirely stopped in excessive hyperaemia. In congestive hyperaemia the escape of venous blood from the brain is checked; and it is evident that, when the veins finally become filled to a certain point, no new arterial blood can enter the capillaries, from which the brain draws its nutriment.

Among the symptoms of irritation in the sensory functions are headache, great sensitiveness to external impressions, etc. The patient does not exactly feel, see and hear more sharply than ordinarily, but they are annoyed by irritations far weaker than such as usually annoy them. Light troubles them, a slight sound, or an insignificant irritation of the nerves of touch excites disagreeable feelings. Morbid excitation causes the dazzling before the eyes, roaring and buzzing in the ears and sensation of an undefined pain. Among the motory symptoms of irritation we have restlessness, sudden starting, gnashing the teeth, crying out, the automatic movement of the extremities, twitching of single muscles and lastly the general convulsions, which are observed in the course of cerebral hyperaemia.

Among the symptoms of psychical irritation there is first such rapid change and loose connection between the thoughts, that clear thinking is impossible. Along with this confusion of ideas, the patient has often false notions about himself and the outside world, or *delirium*.

Delirium is sometimes so real and intense that the patient cannot distinguish it from true perceptions. This is the origin of *hallucinations* and *illusions*. By the former we understand erroneous impressions, which are considered as the product of direct perceptions, without there being any actually existing external objects corresponding to the impression. The patients think they see animals and other objects, which are not present, and that they hear voices when all is quit. By *illusions*, we understand the misapprehension or false interpretation of external objects which really exist. As a result of illusion the most harmless things may become objects of great terror to patients suffering from a congestion of blood of the brain or hyperaemia, and this is particularly the case with children.

Dizziness which is one of the most frequent symptoms of hyperaemia of the brain and of many other brain diseases, is, as a rule, a simple hallucination, since it consists in a void representation of a movement of the body of the patient himself, or of the bodies of surrounding objects, which the patient imagine they see or feel, although they are actually at rest. Closely related to the symptoms of increased mental excitement are sleeplessness and the disturbance of sleep by vivid dreams, symptoms which are common in hyperaemia of the brain.

In many cases of hyperaemia of the brain, disturbances of sensibility, of an irritating character, are the most prominent symptoms. Such patients complain of the head feeling contracted, of more or less severe

headache; they are sensitive to bright light and loud noises; have flashes of light before the eyes, and noises in the ears. They go to sleep with difficulty, and the sleep is disturbed by dreams. In severe cases there are often dizziness and a feeling of and similar to ants crawling over the extremities. The face is usually reddened and the pulse full and rapid. These symptoms must not be considered constant, for in the most dangerous cases of hyperaemia of the brain, in those enlarged by excessive mental labor, continued night watching, etc., the amount of blood in the external organs does not at all correspond to the supply in the brain; and frequently the face is not flushed, but pale. Occasionally these symptoms only last a few minutes. In fact, in some persons, a few glasses of wine or liquor, or some hot coffee suffice to induce these symptoms of congestion in the head; while they remain exempt from them if they keep quiet, and avoid excitement.

The symptoms of hyperaemia of the brain in children, where the motor disturbances are usually greatest, may very much resemble those of meningitis. The two diseases are often and occasionally they can only be distinguished by their course. Such children have usually suffered from constipation for a few days, have had restless sleep, or have been frightened out of it by dreams, which disquieted them after waking and prevented their sleeping again. Then there was vomiting and twisting of some of the limbs. These symptoms are often only preliminary to far severer ones, which causes great anxiety. They are followed by general convulsions. The twitching usually begins in one extremity, or one half of the face, and rapidly spreads over the body. The children do not respond when called, or when the strongest irritants are applied to their skin. They are bathed in perspiration; the abdomen is puffed up, the respiration impaired; the saliva, made frothy by the movements of the masticatory muscles, flows from the mouth. Occasionally there is a pause in the severity of the convulsions, and we hope that the attack will pass off, but after a short intermission, the spasms begins again with their former severity, and in aggravated cases may last for hours.

In spite of the terror that patients in this state cause the attendant and unexperienced physician, a favorable turn can be safely predicted, if the disease does not include meningitis. This can usually be done with a certainty. Inflammatory meningitis is, on the whole, a rare disease, which occurs only exceptionally in previously healthy children without precedent injury to the head, or diseases of the crania.

bone. Tuberculous meningitis, a more frequent disease, often escapes observation till the children have convulsions, but if we inquire carefully we shall find that the attack has been preceded by long illness, and by other symptoms that we have overlooked or at least undervalued. If the child has been well the day before the attack, except some signs of cerebral hyperaemia; if it has had no injury of the head, etc., you may be pretty certain that it will be better, if not quite well, the next day. The attack is usually followed by deep sleep, from which the child awakes fatigued, but otherwise free from threatening symptoms.

In some forms of hyperaemia the mental symptoms predominate to such a degree that the disease is often mistaken and, to the great injury of the patient, it is sometimes considered as an attack of melancholia; at other times as mania. In the former case, after a few days of headache, disturbance of sensibility, and sleeplessness, the patients are seized with an undefined feeling of anxiety and disquiet. They cannot stay long in one place, go about restlessly are worried and are conscience stricken about slight oversights. There is also delirium, which has the same character as the above described frame of mind, and results from the attempt to explain it.

At first the patient struggles against this delirium, which they occasionally recognize as such, and which they fear, as they think they are out of their mind, but they soon weary of the struggle and give it up. In such cases the sleeplessness is almost absolute. Opium, given by ignorant physicians, has no effect, and is dangerous to the patient. A short, restless sleep follows, however, the administration of opium, from which the patient awakes with all the symptoms increased. In this form of hyperaemia of the brain, which develops chiefly as a result of excessive mental labor; there is usually frequent pulse and other symptoms of fever, but in these very cases a greater amount of blood in the face does not correspond to the still greater amount in the brain. The patients are not high colored, but are often even pale. From the fever and sleeplessness they rapidly lose their strength, emaciate, and if not properly attended to, are in danger of dying from this disease. Finally the excitement gives way to apathy, the insomnia to deep sleep, from which the patient cannot be aroused, and in which they die.

In other persons, where the disturbance of the mind is an excess, it appears in maniacal attacks with corresponding delirium. This

form is especially seen after a long continued excessive use of spirituous liquors; in that class of toppers who for a year or so will use very little liquor, but when they have begun to drink, do not know when to stop. This cannot be mistaken for an attack of delirium tremens. The patients are sleepless, run about, fight and bite if they are held, destroy everything that comes in their way, cry, laugh or sing. There is also delirium of varying character; usually the patients consider themselves as injured and betrayed and rage against their enemies and persecutors.

The continued muscular exertion throws them into a perspiration, the heart beat and pulse are accelerated and stronger, the face is usually reddened. This form is also very dangerous if it be mistaken and improperly treated, for then an apoplectic attack, a true apoplexy, or an excessive rush of blood to the lungs, causes death.

Treatment general. Keep the patient as quiet as possible and let him sit in an easy chair, apply chipped ice to his head by means of a bladder or rubber bag; if you cannot procure ice, use moistened towels in very cold water, changing about every two minutes. If the patient has not had a passage for 6 hours previous to the attack give of pill cathartic comp., bottle No. 17, 2 pills, or if the stool has been suppressed for a longer time than just mentioned, give him a rectal injection of seven parts luke warm water and one part of pure vinegar.

In cases of children give them injection only and a dose of castor oil.

If the hyperaemia of the brain is caused by excessive use of alcoholic drink, add to above a foot bath of warm water, in which you put a good handful of each salt and wood ashes.

In hyperaemia of the brain resulting from high living and no exercise, it is very important in addition to the treatment prescribed to regulate the mode of life by avoiding prolonged, luxurious meals, with all the side dishes and strong wine and liquors, as well as coffee and chocolate, but induce them instead to eat a little of *plain* food, drink water instead of wine, liquor, coffee or chocolate and walk a great deal.

Persons subject to this disagreeable trouble, should lead a quiet life, arise early and go to bed at reasonable hours. Eat sparingly of rich food, avoid all sorts of liquor, wine, beer, cider, coffee and chocolate. Leave off smoking and chewing and do not indulge in sexual excess. They should bathe themselves, if possible, every day in cold

water, or at least use the sponge freely every morning all over the body, especially on the head and in the heart regions. If the sufferers are mental workers, they should leave off work as soon as their brain feels tired and take a rest.

The main points to be observed in hyperaemia of the brain, is that the flow of arterial blood to the brain has to be slackened and the flow of venous blood from the same is facilitated, and which will be accomplished by the treatment prescribed.

Anaemia of the brain is a morbid condition, in which the blood is deficient, either in quality or in quantity.

The causes of Anaemia of the brain are those that diminish the blood in the organ, by abstraction, such as external bleeding, or hemorrhages, considerable sweating, ulcerations of ugly nature, and tedious, particularly feverish diseases. This form of disease is particularly common in children, who have suffered from continued diarrhea. Typical examples are not infrequently seen as a result of extensive hepatization in weak persons with pneumonia. Protracted fevers also consume the flesh and blood of the patient and as one symptom of it, anaemia of the brain. In all of these diseases, blood and fluids of the body are lost or used up too rapidly; on the other hand, the amount of blood may be diminished by its formation being limited from insufficient supply of nourishment. Thus in persons, who have died of starvation, the most marked symptoms of anaemia of the have been observed before death.

The affection also results from the overloading of other organs with blood, so that the brain does not get its share.

Cases where, from mental excitement, without of the heart's action, there is paleness of the cheeks and even loss of consciousness and other symptoms of insufficient supply of blood to the brain, seem to indicate that anaemia of the brain may also be caused by abnormal innervation or spasmodic contraction of the arteries.

Anaemia of the brain is the necessary result of diminution of the space in the skull, caused by tumors of the brain, fractures of the skull, or any encroachment on the cranial cavity.

Since it is not merely the presence of blood in the vessels of the brain, but the supply of the oxygenated arterial blood that is indispensable for the normal functions of the organ, it is evident that, even where the absolute amount of blood in the brain is not diminished, but where its circulation and distribution are changed so that only a

small amount of blood enters through the arteries, and but little escapes through the veins, the same symptoms must arise as in true anaemia.

The symptoms of anaemia of the brain, that comes on suddenly, and quickly attains a high grade, differ from those due to one which comes on slowly and is less severe. In the former case the patient becomes dizzy; everything appears dark before them; they become insensible to impressions and incapable of movement; their respiration becomes slow and they lose consciousness; they sink to the ground, usually with spasms. In most cases the patients come out of this fainting fit in a short time; in other cases, which is usually termed nervous apoplexy, consciousness does not return, the swoon ends in death.

In anaemia of the brain, that comes on slowly, just as in hyperaemia, at first there are usually symptoms of irritation, subsequently those of paralysis.

Occasionally the symptoms consist chiefly or exclusively in sensibility. The patient complains of severe head ache, either in the forehead or in the hind part, they are sensitive to light and sound, have flashes before the eyes, noises in the ears, dizziness, etc. These symptoms occur mostly frequently after severe bleeding from the womb, other than at the menstrual period, or other than extensive losses of blood.

In other cases of anaemia of the brain, specially in children, the motor disturbances are more prominent and may be divided into two stages, i.e. irritation and torpor. In the first stage the children are very restless and capricious, constantly toss about in bed; readily frightened, they cry out in their sleep, gnash their teeth; the face is usually flushed, the pulse frequent and the temperature elevated. There is almost always slight twitching of some limb, and often general convulsions. In the second stage the children collapse, become entirely indifferent to their surrounding, and their attention cannot be drawn to any object; the eyelids are half closed, the pupils insensible to light, respiration becomes irregular and rattling; finally death occurs with symptoms of lethargy.

Also, in anaemia of the brain, morbid symptoms in the mental functions preponderate; there are sleeplessness, great excitement, delirium, etc. In some cases this increases to paroxysms of frenzy and decided maniacal attacks. The latter are seen in persons who have had no food or drink for a long time, but they are also not un-

frequently seen in weak, bloodless patients, if their anaemia has been greatly increased by exhausting diseases and abstraction of blood.

Treatment. If the anaemia of the brain be one symptom of general impoverishment of the blood, the patient must abstain from all physical and mental labor and partake of an abundance of very nourishing food, eliminating those, which he knows from experience, do not agree with him. The patient should lie down as much as possible and if the weather permits be in the open air. Let patient take one or two of the following pills, after meals, except supper. Blands Feruginous Pills. Bottle No. 18.

In profound and continued faintness, convulsions, etc., lay the patient flat on his back, remove all clothing, especially corsets, and give the patient whisky mixed with half milk, in teaspoonful doses. If the patient is unable to take this medicine, take of Hoffman's anodyne, bottle No. 25, 6 to 8 drops on a piece of cut loaf sugar and allow it to dissolve in patient's mouth. If too weak to take it in this form, dissolve some sugar in water, adding to it the anodyne and let patient swallow. Children suffering from this disease should be given strong beef or mutton broth, raw scraped beef, as described, and an extremely nourishing diet generally, but no medicines. Very many patients and convalescents die, solely because they *did not* maintain a horizontal position. They must lie to relieve the heart and not force this organ to do work which it is not capable to perform, owing to its weakened condition. If we permit exhausted patients to rise to stool, or to leave the bed too soon, the feet are readily overloaded with blood, the heart receives too little; consequently a sufficient supply does not go to the brain; the patient swoons, and not infrequently does not awaken from the fainting fit. In such cases give at once of the Hoffman's anodyne, Bottle No. 25, as prescribed. To condense the form of treatment we will enumerate the main points:

Laying posture in bed, with little raising under head

Strong nourishing food.

Plenty of fresh pure air.

No bodily exercise.

And taking for some time of the Bland's Feruginous Pills,
Bottle No. 18.

Hemorrhages in the Brain or Apoplexy. This term means the sudden occurrence of complete functional activity, as caused by rupture of the bloodvessels and escape of their contents among the nervous matter. It almost always occurs from the smaller arteries or the capil-

laries of the brain and are caused by structural disease of these vessels, by the diseased condition of the brain surrounding these vessels and by increased pressure of the blood against the walls of the vessels. The bleeding usually occurs when several of these factors act together.

The increased pressure of the blood on the walls of the vessels, by which the latter are ruptured, may depend on any of the causes, which you find indicated under hyperaemia of the brain. The frequent occurrence of apoplexy during long and luxurious meals tends to show that the hyperaemia of the brain induced by temporary and excessive fulness is one of the most dangerous forms. Apoplexies occur at all times of the year; occasionally without any known cause. Advanced age furnishes the largest number of cases, still it has happened to children. Men are oftener attacked than women. There is such thing as an apoplectic constitution, indicated by a short neck and broad shoulders.

Symptoms. Sometimes apoplexy occurs unexpectedly in persons, who have previously felt quite well, in other cases it is preceded by symptoms that excite in the physician and even in the laity, the apprehension that the patient is threatened with this disease. The patient complains of headache, or of heaviness and fulness of the head, of noise in ears, flashes before the eyes and attacks of dizziness; they sleep badly, are excited and irritable. There are also symptoms of occasional temporary feelings of formication and numbness in certain limbs, momentary loss of memory for some words and figures, or temporary paralysis confined to certain groups of muscles. There is no doubt, however, that frequent attacks of hyperaemia and anaemia weaken the bloodvessels in the brain and prepare that organ for apoplexy to destroy its functions entirely.

The stroke of apoplexy rarely develops gradually. In most cases it comes on suddenly and the patient falls to the earth, often with a cry, as if knocked down. During the attack consciousness is entirely lost as well as the power of feeling and moving. Respiration usually continues, but the inspirations follow at long intervals and are usually loud. There is often vomiting at the commencement of the attack; the pulse is very weak and the pupils contracted.

Treatment. Follow the same course as laid down in hyperaemia, and send for a good physician at once, there may be symptoms to his eye, which may lead to save the patient's life.

If the patient has one attack of apoplexy, he must be particularly

careful to avoid all causes by which the blood vessels in the brain may be overfilled and distended. He must especially avoid long, luxurious meals and must keep his bowels regular. He must abstain from wine, beer, ale, whisky or any other kind of alcoholic or malt liquors, also his coffee, if he takes any, must be very weak. Light exercise in open air will be beneficial. In bed his head must rest rather high.

Cerebro, spinal meningitis, is a dangerous febrile disease, characterized by the inflammation of the membranes of the brain and spinal cord, giving rise to severe headache, tenderness of the back of the neck, and paralysis of the eye muscles. It is sometimes marked by skin eruptions, when it is called *spotted fever*. The disease is not contagious.

Treatment. This being a very complicated disease, and is frequently caused by bad diet, malaria, cold, repression of the secretions, changeable weather, etc. It requires the most careful treatment by a trained physician, as so many things have to be observed and which must be counteracted, when they appear to the trained eye. The disease is very malignant and seldom allows a victim to escape.

Before you can get medical aid, see to it, that the bowels are kept open by injections of lukewarm water, keep the body warm, immerse the body in a hot bath containing about a quart of salt. which brings the blood to the surface. The doctor will give other aid to help the sufferer, if within his power.

Inflammation of the brain. In this disease, as in the inflammation of other organs, containing little connective tissue, very important changes take place in the nerve cells. They swell from absorption of nutrient fluid and subsequently break down. Afterwards pus cells are formed, also abscesses, the latter of which sometimes become capsulated. Inflammation of the brain is a rare disease and is not induced by causes which usually excite inflammation in other organs.

The causes which usually bring forth this ailment is concussion, fracture of the skull, inflammation of the surrounding parts of the brain, especially that of the petrous or ear bone; inflammation of the ear can also lead to it. The disease never attacks the entire brain; it is always confined to certain points. The size of these points varies from that of a bean to that of a fist and even larger. The disease may be located in the small or large brain and is most frequently in the grey substance and very near the surface.

Symptoms are similar to those of attacks of apoplexy, irritation of

the entire brain, great slowness of pulse, increased bodily temperature, headache, dizziness, sleeplessness, restlessness, exciting dreams, mild delirium, great sensitiveness to slight irritation of the organs of special sense and great weakness. The duration of the disease varies; some cases terminate in death after a few days, while others linger long periods. Recovery is very rare. Even in the most favorable cases and where a partial cure has been affected, the functions of the brain remain impaired for the rest of life.

Treatment. It cannot be very successful from the simple fact that the disease is not generally recognized until it has induced irreparable destruction of the brain. In order that you will not reproach yourself, it is well to call in the family physician, but he cannot do much more than to order cold compresses to the head. The patient must of course observe a proper diet and must be guarded from rushes of blood to the brain.

Consumption of the spinal cord or locomotor ataxy. The causes of this disease are:

Heridity, as from syphilitic parents.

Veneral excess.

Catching cold and bodily fatigue.

After marching or other bodily exertions and then lie down on moist ground.

Suppressed perspiration of feet.

Syphilis.

The disease is a degeneration of the grey parts of the spinal cord and in the latter stages shortening of the same.

Symptoms. In many patients the characteristic disturbances of co-operation and the decrease of skin and muscular sensibility are preceded for a long time, even for years, by attacks of severe tearing pain in the lower half of the trunk, and in the lower extremities; these are generally rheumatic. In other patients, on the contrary, the first complaints are that the lower extremities become fatigued very easily and very soon. Persons accustomed to walking notice that they tire sooner and more easily than formerly. These symptoms which, are not usually very suspicious, either to the patient or physician, may precede the decided symptoms of consumption of the spinal cord for a long time. The attacks of pain are unmistakably neuralgic and depend on the morbidly increased excitability of the

nerve roots. The tearing pain and tendency to fatigue in the lower extremities are not recognized to be serious and threatening until they are accompanied by other disturbances of sensibility, as, for instance, the feeling as if ants or other insects were crawling over the body; a feeling of numbness, and the sensation of a tight belt around the abdomen. Gradually the gait becomes uncertain and awkward; at first this is only so in the dark, so that the patient prefers remaining at home in the evening; afterward it is the same in the daytime. The feet are lifted too high, and thrown forward and outward, and brought down heavily on the floor. If the patient closes his eyes while standing erect he begins to totter, and, unless supported, falls to the ground.

In many cases the foregoing symptoms are accompanied by disturbances of the excretion of the urine. Most patients are obliged to attend to the call to urinate as quickly as possible, as they can only stand it a few moments and hence it is to be recommended, that they buy urinals, which they wear in their trousers during the day. These symptoms arise because the patient does not perceive the fulness of his bladder, and the desire to urinate does not occur, until a few drops are pressed out of the bladder into the urethra. After a time walking becomes impossible, even with the aid of a stick or crutches, although when the body is fixed, the patient can generally make uncomplicated movements of the extremities with nearly normal force. The same uncertainty and awkwardness come on in the upper extremities, but later than in the lower. Then, when eating or drinking, the patient shake out the contents of the spoon or glass, they cannot longer dress without aid, especially the buttons trouble them; finally they cannot write, knit, or do any other work. The involuntary discharge of urine, now often attains such a grade that the patient wets the bed. In consequence of this, a constant moisture of the parts be added to the patient indistinct perceptions of the irregularities of the bed and his helplessness in changing position, bed-sores will soon aggravate this terrible disease.

The course of the disease is always tedious, many patients drag on for years in a miserable state, the objects of pity. Occasionally the disease remains stationary; in other cases it appears to improve temporarily. Perfect cures are certainly very rare.

Nutrition is frequently not impaired till late; the lower extremities, the buttocks, and muscles of the back emaciate first, so that the bones

of the spine project. It is not till towards the end of the disease that the emaciation extends to the rest of the body. Death generally results at last from the increase of the bed sores, from pulmonary consumption or from other diseases.

It is asserted that at the commencement of the disease, sexual desire is usually increased but the energy and duration of the erections lessened, as well as that, in the latter stages, the cohabiting power is entirely lost.

Treatment. Some hope may be entertained, when the cause of this disease is of a syphilitic origin. In such cases an anti-syphilitic treatment should be instituted, and generally will bring good results.

The more probable it is that, that the disease has resulted from taking cold, the more acute its occurrence, the more severe the pain in the lower extremities, which preceded the symptoms of disturbances of co-ordination and diminished sensibility, the more probable is it, that the disease is of inflammatory or congestive origin and the stronger to begin the treatment with blistering the skin along the spine, which, however, should be left to a physician. The best treatment, however, is when the disease is detected in time, to envelope the patient in a moist sheet and to allow him to sweat in it for quite a time, say 30 to 45 minutes, and after rest from it and a good rubbing with a coarse towel, a luke warm bath should be given and the patient remain in it for about 3 to 4 minutes. Pain will easily be subdued by the administration of one dose of Phenacetine Bayer 2 gr., Bottle No. 23, every 3 hours. The patient needs quiet, rest, good, pure air, close attention and strong nourishing food.

Spasms are involuntary and unnatural contractions of one or more muscles or muscular fibres caused by the morbid irritability involving the twigs of the nerves, which go to the muscles. Among these diseases belongs the

Mimic spasm of the face. In almost all cases the disease occurs in one side of the face, and the symptoms and course are about as follows: Grimaces occur either intermittant or constant, and chiefly consist in the elevation and depression of the frontal muscle, corrugation of the eye-brows, blinking and closing and closure of the eyelids, twitching of the nose, and drawing up or down the corners of the mouth. These attacks set in suddenly and as suddenly subside, to recur, with equal suddenness, at short intervals. The muscles feel hard and tense, and so impede motion that the one eye cannot be as completely closed

as the other. The patient is unable to prevent or to control these motions at will. In the beginning of the disease the affected side of the face is somewhat painful. The course of the disease is usually chronic and of uncertain duration and often remains during life, if not nipped in the beginning. The course of these convulsions are mainly from suppressed mental emotion and also from the irritative instinct. Often it is the reaction, arising from remote organs, as the womb in hysteria.

Treatment. As soon as noticed the patient should bathe the face every 2 hours in cold water, in which a small piece of camphor, Bottle No. 8, has dissolved. Almost any case will succumb to this treatment when applied in the beginning.

Scrivener's spasm or pen palsy, also called writer's cramp, is a morbid excitement of the motor fibres of the nerves which supply the muscles of the fingers and which renders further writing nearly impossible, by inducing spasmodic contraction of the finger muscles. It is seldom that women are afflicted with these spasms, but men have it often. It occurs mostly between the ages of 30 and 50 years, that is, during the time of life when occupation is most intense. Professional penman, clerks, teachers and merchants are most subject to the affliction. Narrow coat sleeves, which compress the muscles of the arm during writing, an inconvenient attitude, but, above all, the use of hard steel pens seem to favor the development of the affliction. Why the disease should develop under these causes is unknown.

Symptoms. The usually precursory signs of wrirer's palsy are a feeling of slight fatigue of the hand, and a sense of insecurity, as if the writer must grasp his pen more firmly. Sometimes the affliction does not advance beyond this stage. When the disease is fully developed, the muscles become convulsed during writing. During these spasms the pen is rapidly twitched up and down, but instead of regular distinct letters, it forms grotesque, interrupted scribbling. The harder the patient tries to continue his writing, so much the stronger the spasm. It is usually painless, although sometimes it is attended by a feeling of tension in the arm. The moment the patient ceases to write, the cramps are gone, and he can execute all other movements undisturbed. Writer's spasm is a very obstinate and tedious disorder. Recovery is very rare and its uniform persistence is hardly ever broken even by a temporary improvement of the symptoms. Some patients who are ready for any sacrifice in order to be rid of this burdensome disease, and from their anxiety for the means of

subsistence, learn to write with the left hand. Unfortunately, however, sometimes in such cases, the left hand is also attacked by the disease.

Treatment. While the majority of remedies have proved to be of no avail, the following can be counted on to give lasting relief: Leave off writing for a week or two, and in case you have to write make yourself a pen holder of cane stem, similar as are used for corn cob pipes, fasten a broad pointed pen in same without metal surrounding the tip point, and fill the cavity of the stem, which projects over the back of the hand, with molten lead; this will compel you to tighten the grip, but until relieved, do not use this pen more than is urgently necessary. Then go every day, or as often as you possibly can, to your butcher when he kills animals and stick the afflicted hand into the intestines as they are drawn from the slaughtered animal, keeping it in this animal poultice ten or fifteen minutes. Besides this hold your hand under pump or hydrant and allow cold water to run on hand for 5 to 10 minutes at a time, repeating as often as five or six times daily. This will effectively cure any case of scrivener's spasms if not of too long standing. If the case is very severe, one quinia sulph. 2 gr. pill, bottle No. 16, should be taken every morning after having had a stool.

Cramps in the muscles of the extremities have somewhat the appearance of rheumatic affections, but it is of a different origin, and is to the muscles what the rush of blood is to the brain, and might, therefore, be termed hyperaemia of the muscles. If taken care of in the beginning nothing is to be feared, but if allowed to run along, it may be the cause of very troublesome diseases, inasmuch as it has a very pernicious effect upon the assimilation and nutrition of the body and can cause great functional disturbances, such as typhoid, intermittent fever, Bright's disease and diphtheria.

The muscular cramps which arise during pregnancy, during labor and after it, also belong to this character.

Symptoms. Sometimes the disease is preceded by a feeling of illness, languor and depression of several day's duration. The actual commencement of the disease is marked by pains, which apparently shoot along the lines of the nerves, and involving sometimes singly, but oftner the upper and lower extremities. Sometimes the hands or forearms and sometimes the legs are afflicted.

In addition to this, there is a sense of formication and of stiffness

and sluggishness in the suffering parts. These symptoms having lasted for a variable period of time, cramps in the calves of the legs and other muscles, set in, which soon are converted into continual contractions. If you are unacquainted with this malady, and see a child thus affected for the first time, you will be deeply impressed by the aspect of the rigid immovable limbs, the extended knees, the heels drawn up, the thumbs forced into the palms of the hands and ascribed to some serious trouble. The attempt to extend the upper extremity or flex the lower is very painful to the patient. The contracted muscles are hard and prominent; the joints have a sort of swollen appearance; the contracting extends to the muscles of the head and belly and to those of the face. The affection is usually free from fever. In some patients the contraction and the commencement of the contraction is accompanied by a sensation of oppression, and of rush of blood to the head.

In the majority of instances the course of the disease is brief, the contractions ceasing after a lapse of a few days and free mobility becomes re-established. The spasmodic attacks usually last for a few minutes.

Treatment. The course of the disease, which nearly invariably terminates favorably, renders much medicine quite unnecessary. Friction of the afflicted parts with a stiff haired brush, usually relieves the spasm; a warm bath will do likewise. The pressure of a cold sadiron against the calf of leg, has a tendency to ameliorate the cramp. In severe cases, rub on afflicted parts spirits of camphor, bottle No. 8, and give one dose phenaticine bayer, bottle No. 23.

In grown persons, where stool is irregular, take one pill cathartic comp. bottle No. 17, at bed time. In children keep bowels open by means of injection of lukewarm water into rectum.

Palsy or paralysis constitutes abolition of function, whether complete or partial, especially the loss of the power of voluntary motion, with or without that of sensation in any part of the body.

It may occur from the separation of nerves from the brain or spinal marrow, partial or in whole. Catching cold, tumors pressing against nerve cords, and certain shocks. Pressure and strain have also been the consequence. Rheumatism of long standing will also induce palsy. In fact, anything which has a tendency to enervate the body, such as a sedentary, luxurious and irregular life, or in persons who are engaged in intense studies or labor, under great distress or anxiety of mind, may be the cause of palsy.

Symptoms. Palsy usually comes on with a sudden and immediate loss of the motion and sensibility of the parts; in exceptional cases it is preceded by numbness, coldness and paleness and slight convulsive twitches. When the head is much affected, the eye and mouth are drawn on one side, the memory and judgment much impaired and the speech is indistinct. If the disease effects the extremities, and has been of long duration, it not only produces loss of motion and sensibility, but likewise a considerable wasting away of the parts affected. The attacks occur sometimes unexpected, but mostly they are preceded for days and even weeks by one or more of those symptoms, described as the formations of apoplexy, such as drowsiness, numbness, dimness of sight, failure of the powers of mind, and loss of memory.

The paralytic stroke is usually sudden, but occasionally it approaches very slowly and the first affection in the latter case shows itself by the paralysation of either, a finger, hand, arm, the tongue or the eyelids.

Treatment. Usually when a patient is affected with this malady, his bowels are constipated and they should be looked after at once, by giving a rectal injection of luke warm water. It is natural that the sufferer should be consigned to the bed and in a room where the fresh air is abundant. Rub the affected parts, when they are on the outside, with oil or mustard, Bottle No. 12, if that does not bring relief, electricity should be applied, which, of course should be done by a skilled physician.

If the palsy is in the face and the same is caused by a blow or shock, cold compresses should be applied. When the disease has arisen from cold and is recent, the affected side of the face is to be covered with well wrung cold compresses, covered with oil-silk or india rubber cloth, and which are not to be changed until after the lapse of several hours. The face may also be wrapped in cotton wool and held over a pot of boiling water. At a later period stronger irritants must be used and oil of mustard, Bottle No. 12, applied to cotton flannel on hairy side and the other side covered with tallow is a good remedy of this character. The mustard application should not remain on affected parts for such a long period as to cause blisters.

For palsy of the shoulder, when the application of oil of mustard fails to do its work, electricity should be applied.

Progressive palsy is very abduate to treatment and all one can do is to make the patient comfortable.

St. Vitus's dance is attributable to a morbid irritability of the motor

nerves, while no derangement, or at least, no constant derangement of the intellectual functions can be detected.

Symptoms. St. Vitus's dance is characterized by movements of the voluntary muscles, which, however, are not excited by volition, but take place against the will of the patient, his consciousness in the meantime being perfectly clear. These movements go on not only at times, when the patient does not intend to move, but also when he moves voluntarily. In the latter case, as the voluntary motion is complicated by the involuntary, the proposed action of the patient either is frustrated or carried out imperfectly or awkwardly.

In most cases the disease begins very gradually and is not recognized for some time. It may be noticed that the sick child drops and breaks things a good deal; that it does not sit still; that it writes badly or makes more mistakes than usual in playing on the piano, and is accordingly scolded or punished that it may be more careful and correct its awkwardness. The poor child often does not know what it has done, and in consequence of the unjust reproaches, becomes either sad and depressed, or else grows irritated and perverse.

The restlessness of the muscles, meantime, becomes more and more apparent. The acts of awkwardness become more frequent and are grosser than ever. The child misses in reaching for its cup, stabs itself with the fork, or makes extraordinary grimaces. It is very unusual for this disease to develop suddenly, and from the outset to present the remarkable symptoms which characterize St. Vitus's dance in its latter stages.

In pronounced St. Vitus dance the utmost variety of motion follows each other, in a manner so manifold and grotesque that the term "insanity of the muscles" has been applied to the disease. In the face, the eyebrow, are alternately contracted and separated, the forehead wrinkled and smoothed, the eyelids rapidly winked and now and then are fast closed for a moment. The mouth is successively pursed up, closed, then suddenly opened and shut, now spreading into a smile, now drawn down as if to weep, while the tongue is often and suddenly thrust forward. The head itself is turned forward, backward and sideways; the shoulders are raised or sunken. In fact every muscle of the body is in motion and beyond the control of the patient; they are usually not capable to sit upon a chair, but slide off from it to the ground. The morbid restlessness grows all the more intense and

general, if the patients pay attention to it, especially if they know, that they are being watched.

Nearly all the motions of the body, with the exception of those of deglutition and respiration, are seriously embarrassed by the restlessness of the muscles. In eating the fork misses the lips; in drinking the beverage is spilt, so that the patient often has to be fed. Even in slight cases all occupations requiring delicacy of manipulation becomes impossible, as, even in walking, the feet only touch the ground by a circuitous route, and as the entire body is constantly making superfluous and irregular movements, there is something very remarkable and characteristic in the gait of the patient.

The other functions and the general health suffer comparatively very little. It is easy to comprehend why the patient should be dispirited, sensitive and wilful, when we consider that for weeks he has not been master of his motions and that he has been constantly taunted about the mistakes he makes. Not unfrequently the grimaces of the patient are so at variance with his actual humor, or so unsuitable to the subject of conversation, as to give him a foolish, imbecile look, although his mind is quite sound. When of long duration, however, the accuracy of judgement seems really to be impaired, and other intellectual disorders arises. Sometimes, but not always, there is complaint made of headache and pain in the back. It is strange that the apparent exertions the muscles undergo, it causes no fatigue, the joints of the limbs, however, are sometimes swollen and painful from the constant strain and motion. St. Vitus' dance is usually not accompanied by fever, although the pulse is generally somewhat quickened. The appetite, digestion, secretion and excretion do not present any constant peculiarity. When the disease has been of long duration, the nutrition of the patient suffers in consequence of the loss of rest, and he becomes blood poor and thin.

The disease rarely terminates before the end of six or eight weeks, and it often continues for four or five months. There are rare cases even, which have been recorded, that the disease has become habitual and lasted throughout life. The rule of the ailment is, however, that recovery is the most usual termination of the complaint. It will only cause death when the disease becomes complicated with others.

Treatment. In children, where the disease is most frequent, in fact in ninety cases out of a hundred, is caused by intestinal worms, give of *San-tonin*, Bottle 19, one granule and watch the stool if no worms are found in

it repeat the dose four to five times. After the system has been cleansed of worms, St. Vitus' dance will usually disappear. In grown persons, where the cause is from rheumatism, a hot bath, prepared as follows: Take 8 ounces of iron filings and 2 pounds common salt, place it in an open vessel and fill it with vinegar, leave it there till the iron is nearly or wholly dissolved, then take one-half of the mass and mix it in a hot bath (as hot as the patient can stand it, adding hot water as it cools) so that the patient is entirely immersed in same, and let him remain in it for at least one hour at a time. This bath should be given every other day. Then also give daily, morning and night, one Assafoetida pill, 2 grain, Bottle No. 20. On the day when the patient does not take a bath sponge his back with cold water, and rub dry with coarse towel.

During convalescence the father, mother or nurse should endeavor to teach the patient by a systematic and humane system of discipline, to resist the involuntary motions by the force of his will.

Lock Jaw or Tetanno. is a derangement of the motor functions, and is usually induced by lacerated, punctured or gun shot wounds and wounds in which foreign bodies remain lodged. Injuries of this kind are more dangerous upon the feet and hands, in fact, the extremities, than other parts of the body. These wounds never give rise to lock jaw, however, except under certain conditions, of which sudden change of temperature is known to be one. Lock jaw may also be caused from the effect of cold, without any previous wound, as when a person has slept upon the moist earth, or has been wet while his body is heated. An overdose of strychnine will also cause lock jaw. It happens oftener to men than women, and in stronger constitutions than in the weaker ones. The disease is more frequent in hot climates, than in colder countries.

Symptoms. Lockjaw is characterized by continuous spasms, which principally involve the muscles of the trunk and the mouth. The malady is usually preceded by signs of fever, of no great severity, and pain and stiffness in the back of neck, which may readily be mistaken for a trifling fit of rheumatism. If such symptoms make their appearance after the receipt of a wound of a character as described, and if, at the same time, the aspect of the wound change, and should it become dry and painful, we may already fear great danger to the patient. When the disease has fairly set in, the head at first is almost always fixed and drawn backward, by rigid contractions of the muscles of the

neck. Spasms of the muscles of the mouth press the jaws firmly together, and, at the same time, swallowing is impeded or prevented by spasms of the pharynx. From the nape of the neck the disease extends over the muscles of the back. Thus the entire body is bent backward in the shape of a bow. The muscles of the abdomen and chest are also involved in the spasm. Hence the belly is tense, contracted and hard as a board and there is a sense of constriction at the pit of the stomach, which is very painful to the patient. The contracted muscles remain upon the stretch throughout the whole disease. The muscles are hard as stone and the seat of the most severe pain imaginable. The forehead is wrinkled, the brows knit, the eyes rigidly fixed, and sunken deep into their sockets. The angles of the mouth are drawn outward, and the lips are drawn apart, exposing the clinched teeth. The aspect of the patient in this condition awakens feelings of deep compassion mingled with horror.

At the outset of the disease the paroxysms do not occur spontaneously but are provoked by the most trifling causes. A faint jolt of the head, the sound of shutting a door every movement, which a patient desires to make, the acts of chewing or swallowing or even the suggestion of the idea, suffices to bring on a new attack. The inability to swallow, and the spasmodic seizures induced by every effort to drink, create a certain resemblance between lockjaw and hydrophobia. At first the paroxysms are brief, but at the height of the disease, or even an hour before the remission sets in, consciousness and the intellect generally remain unimpaired until the last in this frightful disease. The unhappy patient suffers from hunger and thirst which he is unable to relieve. As in all other violent muscular exertions, the skin is bedewed with sweat and the pulse is frequent and weak. The temperature is always high. The bowels are usually somewhat constipated, and sleep, though ardently longed for, is impossible. There are cases where the patient perishes only a few hours after the outbreak of the disease. The majority of patients are not relieved from their suffering so soon; for three or four days the cramps and the frightful pain and dread of suffocation which accompanies them, continue to increase in duration and frequency until the sufferer expires. Recovery is extremely rare.

Treatment. Very few curative agents are known to the medical profession, which have proved to give favorable results. It is always to be recommended to call in the family physician, even if he cannot do much good, but it will always be a solace to the surroundings of

the patient in case the disease terminates fatally, which it usually does.

When the first symptoms appear, however, the following remedy should be at once applied. Put the patient in a very warm bath and while in there protect him from all draughts and cold; heat a half peck of pebble stones "red hot" and put them in an iron vessel; place over this vessel a bench or large cane bottomed chair, on which the patient sits or lies; then cover the patient with blankets and rubber sheet or waterproof, and empty into the vessel with the hot pebbles about a pint of water, adding more after it evaporates, and allow your patient to sit or lay in the vapor thus created. Of course his head must not be covered. Keep him in this vapor bath for 10 to 15 minutes, rub him perfectly dry and put him to bed. It will usually relax the spasm. Other remedies will be furnished by the physician.

Epilepsy or falling sickness is a chronic disease, characterized by convulsive attacks, accompanied by loss of consciousness, loss of sensation and incapacity of voluntary motion.

Symptoms. The outbreak is usually announced by a shrill cry, whereupon the patient loses all sense and falls to the ground, usually backward or sideways. He scarcely ever has time to see a convenient place, but falls regardless of place, often in a most perilous situation, striking, perhaps, against a hot stove, or sharp corner or falls down stairs. There are but few epileptics whose disease is of long standing, who do not carry with them the marks of more or less severe injury. The fall is usually followed at first by contractions, in which the body and extremities are extended, the head drawn backward or to the side, the mouth firmly closed, the eyes wide open and rolled upwards or inward, the chest fixed and breathing temporarily ceased. After a few moments the jugular vein along the sides of the neck becomes distended and the face purple, and the whole body is thrown into convulsions. The countenance hitherto unmovable is thrown into active agitation; the angles of the mouth are drawn into all sorts of shapes; the forehead and eyebrows twitch, the eyes open and shut, the jaws are forcibly pressed together, and are worked backward and forward so that the teeth grate audible. The teeth are not unfrequently broken off, the tongue bitten through, and even the lower jaw may be displaced. Upon the lips there appears a saliva, rendered frothy by the constant movement of the mouth and which, too, is often bloody from wounds of the tongue or cheeks, The head is jerked forward and

backward and from side to side; while the convulsive twitching of the muscles of the trunk, pitch the body in all directions. The fingers usually are flexed, the thumb being pressed into the palm of the hand, a sign, which most people erroneously believe to be characteristic of the disease. Throughout the whole fit the respiration is much embarrassed as is in all great muscular exertions, the beat of the heart is quickened, the pulse is small and irregular, while the skin is bathed in sweat. The bowels and bladder are often evacuated unconsciously, and it has also occurred that erection and seminal emissions have taken place. Throughout the entire fit consciousness is completely extinguished that the patient is not aroused, nor does he betray any signs of pain, even though he may strike against a red hot stove, or fall into the fire so as to completely char a limb. After the fit has lasted for ten minutes, or, at the most, a quarter of an hour, (which usually seems to the bystanders much longer) it subdues either suddenly, or the twitching gradually grows weaker and weaker and finally ceases. In both cases it is followed by complete muscular relaxation. Very often the fit terminates by a long sigh and now and then by vomiting and profuse evacuation of the bowels.

It rarely happens that a severe epileptic fit is immediately followed by complete recovery; after the attack is over, generally, unless violently aroused, the patient falls into a deep sleep with prolonged snoring respiration. If awakened from this he usually looks blankly or anxiously around him. He does not know what has happened, and can scarcely account for being in a strange place, or in bed, or wounded. His sole desire is to be allowed to sleep. Next morning, though still somewhat unwell and low spirited, and complaining of confusion about the head, he has recovered his faculties, and all traces of the attack vanish in the course of the day.

While epileptics seldom recover fully from their disease, and are not usually long lived, yet they rarely die during an epileptic fit. Their death is much more frequently due to the progress of brain disease, which has given rise to the epilepsy, or the patient may die from the effects of injuries which he has received during a fit.

Treatment. The best preventative means against epilepsy is doubtless the avoidance of the intermarriage of families in whom this disease is hereditary. Further, an epileptic mother should never suckle her own child; this duty should be delegated to a vigorous wet nurse or the nursing bottle.

The following rules must be observed by epileptics.

All exhausting and excessive mental occupations must be forbidden.

Epileptic children must not sit 5 or 6 hours in a school room, but should spend most of their time in the open air and take cold baths under the proper supervision.

Epileptics must not indulge in sexual intercourse; onanism, which is often the cause, must be stopped, intemperance in intoxicating drinks must also cease. Where these last mentioned vices exist they must be opposed with *inevitable sternness*.

If the patient seems to suffer with a poverty of blood either in quantity or quality, let his diet be very nourishing and rich or in case of too much blood put the patient on a vegetable diet and let him drink large quantities of pure water and to exercise freely in open air, country preferable.

In children epilepsy is often caused by intestinal worms, in such cases give one Santonin Granule, 1 gr., Bottle No. 19. Many cases of epilepsy have been cured by an exclusive milk diet.

In a fit where the patient protrudes tongue it should be put back into the mouth, and a piece of cork or very soft wood placed between his molar teeth. He should be laid on a couch or rug, fresh air freely admitted around him, his head slightly raised, and all clothing loosened, which might possibly interfere with respiration. Throwing cold water on the patient's face should never be done as it does no possible good. The patient must not be bound or held during a fit, nor should his thumbs be forcibly unclined. Many people think that the fit will soon subside if this is done. After the attack is over, those patients generally feel best, who have been allowed to struggle through it unmolested. The indications of the disease itself require, that the patient should be protected from the injuries which they are apt to inflict upon themselves during a fit. Whenever circumstances permit, an epileptic should not be permitted to go unwatched. This is the best and surest preventive. It is also a good plan to let a patient sleep in a bed with high sides, similar to a child's crib. After the fit the patient should be allowed to sleep undisturbed and as long as nature demands. Regular outdoor exercise is very beneficial, but should not be indulged in, to such extent as to cause fatigue. Epileptics should be daily sponged with ice cold water and thoroughly rubbed dry after this ablution. The proprietors of this publication are in possession of a specific remedy against epilepsy, and will be pleased to communicate it to any sufferer from this dreadful disease.

While they do not guarantee an invariable cure, they feel confident that epileptic sufferers will be largely benefited by the remedy, and the majority will only remember the past and not be afflicted, with the diseases after fully complying with the treatment prescribed.

Convulsions in Infants, or Eclampsia Infantum. Is a sort of epilepsy, but differing, in the recurrence of the fit, instead of continuing for years, lasts for a few days, or hours only, at the end of which time the convulsions terminate either in recovery or death. It occurs in vigorous, full-blooded children, as well as in the puny, and in boys as often as in girls. One of the most frequent causes is, the practice of allowing the child to nurse immediately after the mother has been extremely angry. The child should not partake of such breast, until it has been properly drawn.

Symptoms. For a few days the child is restless during sleep and sleeps with its eyes partly open, contorting the face and starting when touched. Even while awake, a difference in its manner is observable. The child is cross, does not seem to enjoy its play, cries a great deal, and often changes color. The character of these convulsions are identical with epileptic fits, the head is thrown back, the extremities are extended, the eyes turned up, and the respiratory movements arrested, after which the convulsive motions commence. These spasms equal the epileptic convulsions in violence. The face is reddened, frothy saliva appears upon the lips and the skin is bathed in sweat; the little belly is inflated from ant, which the child has swallowed; the respiration is much embarrassed and the pulse is small and frequent. At the same time consciousness is entirely suspended, and with it all sensation. A fit of this kind usually lasts from a quarter to one-half hour and sometimes even longer. The fit usually terminates with a long drawn deep expiration, often, too, by a profuse evacuation of the bowels. The child then falls into a deep sleep, and often, in fact, in most cases, on next day is as well as it ever was. Death may occur during these fits or also from exhaustion during the following sleep. It is a very dangerous disease among children during the first months of life, and a large proportion of those attacked, die, if not properly cared for. In older children the disease usually terminates in recovery.

Treatment. If the previous health of the child has been good, and his appearance still be one of robustness and vigor during the fit, give the little sufferer a clyster of one part of pure cider vinegar and three

parts of luke warm water and applying cold compresses to the head; the convulsions will soon subside. On the other hand, if the child be puny and enfeebled by long sickness, let him have a clyster of 4 drops Tincture of Valerian, Bottle No. 24, and 3 table spoonfulls of luke warm water. If the convulsions are very strong, moisten a piece of cotton flannel with oil of mustard, Bottle No. 12, and apply it to the calf of leg of the patient, but do not allow it to draw blisters. You may also place the little sufferer into a warm bath. Under no circumstances give the child any paregoric, soothing syrup or other similar poisonous mixtures.

Hysteria. The fact that hysteria is observed almost exclusively in females, and principally in females between the age of puberty and that of the extinction of the sexual functions, and that in a great number of cases hysteria is accompanied by a morbid condition of the sexual organs, have given rise to the supposition that hysteria is a disorder of the general nervous system originating in the nerves of the organs of generation. All the womb diseases and those of the ovaries do not produce hysteria, it is more noticeable in ulcerations of the mouth of the womb and in the flexion or falling of the same. In rare cases hysteria is produced by irritation of the genitals arising from excessive sexual intercourse, or imperfectly effected coitus, from onanism or from simple sexual excitement. The last case, especially, is an extremely rare cause and it would be a sign of narrow mindedness and frivolity, as well as the most imperfect comprehension of the nature of women, to ascribe all cases of hysteria, whose source cannot be traced, to the structural change of the genitals, to an over excited sexual appetite, or to its unnatural gratification. In this connection, attention should be drawn to the ridiculous idea that all the hysterical widows or old maids, who are hysterical, without having diseases of their genital apparatus, suffer from suppressed sexual passion, or gratify it by an illegitimate manner. This belief is deep rooted in many, but anything more preposterous cannot well be imagined.

The frequency in which hysteria occurs in childless women, in widows and in old maids of the upper classss of society, is attributable to mental rather than physical influences. The effect of strong mental impressions upon the nervous system at large it often quite evident even in perfectly healthy persons.

Persons under the influence of great terror stand as if thunderstruck, unable to move from the spot; an angry man clutches his fist, bites

his lips and moves restlessly to and fro without act of his will. Every day we have the opportunity of observing that mental emotion has an influence upon the excitability of the nerves; that it causes the cheeks to redden, or to grow pale, the muscles or skin to contract or to relax, the tears or saliva to flow. If all these various disturbances of innervation can arise from transitory mental impressions, it is easy to imagine that permanent nervous derangement may develop under the influence of the permanent mental emotions, which beset a woman, who finds all the expectations and hopes of her life disappointed; who believes that she has failed in her vocation, and who, under the depression consequent upon such feelings, is unable to devote her thoughts into other channels. The state of mind which leads to hysteria depends not only upon external accidents, but much more upon the mental impressions made by the accidents upon the individual. A fate which may befall one person without producing any apparent effect, may be the source of the deepest and most lasting depression in another. Hysteria is often seen in women, wedded to impotent men yet it originates quite frequently in the sombre feeling and miserable consciousness of a wasted life, which result, when social claims of married life are not duly respected, or when the sentimental anticipations and fantastic ideals of a foolish girl are not realized.

Improper nourishment is often the cause of hysteria.

The mode of life of a patient and her education have a most decided influence in this respect. The less a child is taught to control itself; the more it is allowed to indulge in immoderate grief over a broken toy; the more the rod is spared when it gives away to outbursts of excessive anger or passion, stamping its feet and throwing itself upon the floor, all on account of some disappointed expectation or the refusal of some request, so much more apt will it afterwards be to become hysterical. If we teach a child to be industrious to be conscientious and to control itself. If we prevent growing girls from doing some needle or crochet work all day long, or from occupying themselves in other ways, which permit of their indulging in dreams and reveries; if we keep improper books, likely to give them stilted ideas out of their hands, we shall have done our best towards averting the danger of hysteria.

Hysteria is a very rare phenomenon among men. Here, too, it usually proceeds from derangement of the sexual apparatus, although

this is not always the case; but in men, likewise, it is only in instances of decided congenital or hereditary tendency to the disease that it can be excited by venereal excess, onanism, and the like.

Symptoms. The most striking are the uneven and fluctuating state of the circulation in the outside portion of the body. Most patients have cold hands and feet (constantly), while, without apparent cause, the natural color of the face gives place to a glowing redness, often accompanied by a burning sensation. The urine which is discharged in large quantities, contains but little of the solid, constituents of the urine, is of a watery appearance and hardly any odor. In the first place in the outset of the affection we are struck by the rapid fluctuations which takes place in the spirits of the patients, and by the sudden transitions from the most unbounded gayety to the profoundest gloom. These symptoms are ascribable to the mental and physical sensibility of the body. As mental impressions produce an unusual influence upon the temper of the patient, so, too, suggestions which would produce no apparent effect upon the spirits of a healthy person, produce a sense of annoyance or of repugnance in an hysterical one, seldom however if the sensation is one of gratification and pleasure. While the affection is still recent it is almost always possible, by adroitly conducting the conversation, in the course of a few minutes, to make the patients laugh and weep alternately. The real and imaginary impressions which inspire the patient with a sense of disgust or displeasure are the predominant ones, so, her spirits gradually become more and more depressed. She is constantly sad, -unhappy, and in despair about her fate, even although she may be in possession of everything which can tend to make life enjoyable. This constant and apparently unreasonable lamentation and weeping, gradually tire out the sympathy of the friends of the patient. Her relatives become indifferent to her troubles, do not listen to her complainings, or allow it to be perceived that they are becoming tired of them. Unfortunately hysterical persons become subjects of ridicule to the inexperienced observer. It is to this absence of sympathy and to this gradual diminution of interest, that we may most reasonably ascribe the tendency which develops in nearly all hysterical patients to exaggerate their complaints and to feign diseases, a tendency which, although really a symptom of the malady, does away with the last vestige of sympathy for their condition. The capacity of such a patient for inventing conditions calculated to excite notice or sympathy is something incredible, and is often very difficult to separate the truth from falsehood. It is

a very common occurrence for a patient to declare that she cannot make water, and for her to submit to the passage of a tube into her bladder twice a day. It is equally common for her to remain in bed for months or years, asserting that she can not stand upright. It is easy to see what a treasure animal magnetism must be to a hysterical person, and with what alacrity they submit to the manipulations of the "magnetizers", and that having once "got into magnetic relation" with some other person, and thus become enabled to perform all manner of new tricks, they leave off their old ones, and thus are "cured of the most wonderful diseases by animal magnetism." It is only necessary for the right man to appear, in order to convert any decidedly hysterical female, to the opinion that she is all right.

The power of reason usually remains unimpaired in hysteria. Like other people, they are able to connect one idea with another, and to form correct conclusions, although they are so preoccupied with a sense of their own sufferings as to be unwilling to think of other matters.

At the menstrual period and immediately prior to it, the disease is almost always aggravated. Death from hysteria is one of the very rarest occurrences.

Treatment. Cold water baths taken regularly every morning, exercise in open air, good plain nourishing food; to abstain from all alcoholic or malt beverages are the principal rules which must be followed before looking towards relief. Then take every morning one pill of assafoetida, 2 grains, bottle No. 20, and should, in the beginning of the treatment, the fits be of a strong nature, give of tincture of valerian, bottle No. 24, 2 drops in a tablespoonful of cold water during the attack.

Moral treatment is of the most utmost importance in all cases of hysteria, whatever the source of the disease may be, and you must endeavor to exercise the patient to oppose the impulse and try to have her overcome by will power the hysterical attack. In your persuasions be kind but firm and let your patients feel that they have your fullest sympathy, but that you will tolerate no nonsense.

Hypochondria is a disease of the mind, it being oppressed by a painful impressions. The hypochondriac is always bothering himself by the idea that he is sick, or that he is going to be sick. The predisposition to hypochondria is very slight indeed during childhood and is far less in females than in males. It is greatest between the ages of

twenty and forty. Its origin seems to proceed from debilitating influence, from disappointment, failure of speculations and an ill selected career.

It is very often induced by the companionship of a hypochondriac with persons having a predisposition.

Symptoms. It develops very gradually, at first there is a sense of illness, which troubles and oppresses the patient, but which does not disturb his judgment. The more profoundly the disease takes root, so much more does the patient endeavor to discover his indisposition. He scrutinizes his tongue, his stools, his urine; he counts his pulse and handles his abdomen. Every trifling irregularity which he perceives, the slightest irritation, the faintest coating of his tongue, a transient colic, an insignificant cough, are all of the utmost importance to his eyes; not because he suffers more than any one else from such symptoms, but because they seem to afford him a clew to the nature of the grave and obscure imaginary disease. To-day he may dread an apoplexy, to-morrow he may think that he has an ulcer of the stomach, at other times he imagines that he has heart disease, or that he is consumptive, or some other grave malady. A hypochondriac always thinks the doctor makes light of his sufferings.

In the worst form of the disease, the patient loses all interest for matters, which do not bear upon the state of his health. He becomes abstracted, forgetful, and negligent of his affairs, gives himself no further concern about his family, and often remains idle in bed for a long time.

Treatment. It is useless to dispute with a hypochondriac and to try to convince him of the error of his ideas. The only way to cure the patient is to rid him of his morbid sensations, by effecting relief for the disease he complains of. The patient should be bathed every morning in cold water and attention should be paid that his bowels are kept open by administering every other day for one week, one Pill Comp. Cathar, Bottle No. 17, never allow the patient to overdose himself. Further the patient should be induced to take long walks in the woods or open country, always accompanied by some congenial friend, who will divert his mind. The sawing of wood, practice of gymnastics and almost any mechanical pursuit is good for the patient. Amusement such as the theatre or concert, produce some benefit, more, however, is effected by traveling, or the study of some agreeable object. Be it remembered that more good can be done to the patient

by diverting his thoughts from his imaginary disease, than by all the medicines in existence.

Melancholia, is also a disease of the mind, when the patient imagines all sorts of things; such as believing himself an outcast and lost forever, that people talk about him, takes almost everything for an insult, is easily scared. Such patients are dangerous to themselves and others. Through suicide, murder and arson he endeavors to help himself. His mind is in the first stages of being unbalanced and the poor sufferer should be placed in an asylum, where a cure is usually effected sooner or later.

Mania belongs to the same class of diseases as the foregoing and can best be portrayed by the first stages of intoxication. Its symptoms show themselves by taking great risks, unusual mental activity and hobbies for impracticable things. A patient suffering with mania, thinks quickly, but his thoughts do not become mature. He acts on first impulse without considering consequences, and often has such patient ruined his family by losing everything in wild schemes and speculations. Such sufferers, if they have the disposal of money at their command, should be placed under guardianship, till their condition can be altered, and which is best done in an asylum.

Insanity and Idiocy. Sufferers with these terrible ailments should not be allowed at large and be taken care of in the proper places of the state or of a private nature, and very often permanent cures are affected. To treat these diseases in the ordinary way is not alone a folly, but often becomes the cause of a crime when the patient is left unguarded.

Dreams. Are usually signs of a bad digestion and illy ventilated sleeping apartments, and if you remedy the causes you will not be bothered with dreams and awake refreshed in the morning after an undisturbed night's rest.

Somnambulism or sleep walking is a condition of the nervous system in which an individual, during sleep, performs actions appropriate to the walking state.

Treatment. Light supper will, well ventilated rooms, no excitement, cold baths and nourishing food sparingly taken, in connection with watching the patient are the best preventives for this disease. If constipated, regulate the bowels by a fruit diet. When a somnabulist gets up at night and you notice him in his act, be careful and do not

scare him, rather coax him gently back into his bed, and bathe his forehead with cold water.

Aphasia is a condition of the mind, which prevents a patient partially or in the whole to express his thoughts. It is caused usually by a rush of blood to the brain and subsides generally when the blood has been absorbed.

Treatment. Cold compresses to the head and be careful not to excite the patient, but endeavor to analyze the correct wishes of the patient and grant them, if within reason.

Stottering is an ailment, induced by not having proper control over the respiratory organs.

Treatment. Never look at a patient when speaking, and induce him to talk slow after he has formed his thoughts. In children "Patience" is the best cure. When it is a nervous affection, give a nourishing diet.

Monotony in Voice, is usually a residue of diseases such as typhoid fever, scarlet and diphtheria and about the only remedy is electricity, scientifically applied by a specialist.

Alcoholism, acute and chronic, a disease so prevalent that it does not require any description.

Treatment. In dangerous cases of intoxication put cold compresses to head and make the patient drink large quantities of luke warm water till vomiting follows. One hour after vomiting give five drops of Tincture of Valerian, Bottle No. 24, in wine glass full of water.

The best remedy, however, is to abstain entirely from any intoxicating beverage and a person, who has formed this resolution, should be aided by moral support in keeping it.

Diseases Of the Organs of Digestion.

THE MOUTH.

BLISTERS AND CANCERS

ARE those little blisters, which form in all parts of the mouth, when the digestive organs are out of order, and contain a watery fluid.

Treatment. Clean your mouth thoroughly with luke warm water. Dissolve borax, Bottle No. 3, about a thimble full in a glass of pure warm water, and fill your mouth with the solution, keeping it there as long as you can stand it, also gargle then spit out, *never swallow*. Take inwardly of Chorate of Potash, Bottle No 7, about as much as will lie on the point of a pen knife, dissolve it in a table spoonful of water and swallow.

Toothache. The best remedy for this is to keep your teeth well cleansed, using nothing but pure water and the brush. Avoid all tooth powder, tooth paste and sundry articles. If your teeth are decaying, let the dentist look after them. Never have a tooth pulled if it can be otherwise fixed up.

If the toothache is of a neuralgic character use the remedies prescribed for that disease.

If your teeth are decayed and show cavities have them filled, but in order to kill the pain, which you suffer, before you can see the dentist, saturate a bit of cotton in Carbolic acid, C. P. 10%, Bottle No. 5, and put same into cavity.

Teething of children is nearly always accompanied by other troubles, such as fevers, restlessness, flow of saliva and swelling of the gums. The child should be kept quiet during this period, not be subjected to draughts and sudden changes of temperature, if possible its diet should

be nothing but the mother's milk. Mothers should not excite themselves or fret, as that would cause pain to child. Keep the mouth of the baby clean and wipe it out carefully every day with a clean wet rag. Should you find any blisters, dissolve a pinch of borax, Bottle No. 3, in a glass of water and wipe the mouth with it, and cleanse it afterwards with water.

Inflammation of the Mouth can be of catarrhal, croupous and diphtheritic origin, and is usually only found in babies after they have some of their first teeth, which make quite visible impressions in the mucous membrane of the tongue and cavity of the mouth. The inflammation often stretches over the whole cavity and shows swelling of considerable extent. The cry of the little sufferers is hoarse, their breath of a bad odor, and they cannot be induced to take the breast, and when driven by hunger to take it, usually let go under heart-rendering cries. Such babies should then be fed with a teaspoon. Their little mouths are dry and seem to be burning and swallowing seems to be laborious.

Croupous inflammation can further be noticed by the formation of a thin membrane, which, when in shreds, is pulled away, often leads to severe bleeding.

Treatment. Keep the bowels of the little sufferer open by injection of luke warm water and wash the cavity of the mouth with Borax, Bottle No. 3, one-quarter teaspoonful to a tumbler of water, which should be of proper temperature. Apply this solution to a clean linen rag and apply about every 3 hours and your little one will be soon on the mend.

Sore mouths of grown people should be treated likewise, by dissolving one teaspoonful of Borax, Bottle No. 3, in a tumbler of water, taking a mouthful every 30 minutes and keep it in mouth as long as possible and then spit it out. Never swallow this medicine.

Scurvy of the mouth is most frequently caused by a diet consisting chiefly of salt meat and the absence in the articles of food, of potatoes and other vegetables.

Symptoms. Chewing is very painful and often impossible, on account of the swelling of the gums. The secretion of mucus and saliva in the mouth is greatly increased. Haemorrhages occur on attempting to chew, as well as from slight pressure on the gums. The decomposition of the contents of the mouth, which are mingled with blood, causes a very penetrating and disagreeable odor. These sym-

ptoms, taken together with a feeling of great debility and lassitude, and particularly of a sense of excessive weight in the lower limbs, depression of spirit, a sad feeling and despondency confirms the diagnosis of a scorbutic affection of the mouth.

Treatment. The patient should be put on an exclusive milk and vegetable diet. Let him drink the juices of 3 lemons daily (in three doses) and take of white oak bark (next to tree) 6 ounces and boil in three pints of water, down to one quart strain, and use the decoction as a mouth wash. Very beneficial in scurvey of the mouth are the juices of mustard leaves or water-cresses. Take these herbs and mash them immediately after you bring them from the garden and press the juice from the pulp. Give hourly in teaspoonful doses.

Mumps or Parotitis is an inflammation of the parotid glands.

Symptoms. It is usually preceded by fever, accompanied by depression, headache, loss of appetite, restless sleep, etc. After the fever has lasted two or three days, or in some cases simultaneously with its occurrence a swelling forms, which, beginning near the lobe of the ear, rapidly extends over the cheek and to the neck. Usually only one side is at first affected. In the middle it is firmer and at the surface softer; the skin over it is pale or only slightly reddened. This swelling is accompanied by a feeling of tension and pressure, but no severe pain; the motions of the head are impaired, the mouth can only be slightly opened and chewing and swallowing are difficult. The annoyances are so slight in proportion to the disfigurement, which gives the name to the disease, that the patients excite more laughter than sympathy. The swelling almost always soon extends to the other side of the face. About the fifth or sixth day, occasionally even earlier, rarely later, the fever ceases, and after eight or ten days the face appears natural.

Treatment. As mumps always end in a cure if left to itself, we have only to protect the patient from injurious influences, and to regulate the digestion and bowels, while the disease lasts. His diet should be a light one consisting of soups and gruel. The bowels should be kept open by fruit, or if the patient shows obstinacy in its influence, give him, if a grown person, in evening about 8 or 9 o'clock, one pill, cathartic comp. vegetable, bottle No. 17. With children a dose of castor oil will suffice. Keep the patient in bed, cover the swelling with wadding and as long as the fever lasts do not allow him any meat or eggs, or anything hard to digest. If the

swelling becomes hard and apparently forms suppuration, you had better call in a surgeon to make a small incision to let the pus out. If the swelling be red and the patient winces when you press on it, apply cold compresses. In strong fluctuations warm poultices of corn meal are very beneficial.

Salivation or abnormal flow of saliva The normal secretion of saliva during twenty-four hours in a healthy person of full growth is usually estimated at ten ounces, but varies even in health one or two ounces more or less. When any of this saliva fails to pass into the stomach with the food, or flows from the mouth, or is spit out or is swallowed by itself the saliva does not perform its function and that is disease.

It is caused by irritation of the mucous membrane of the mouth, by strong substances, such as tobacco, liquor, etc., and also by constipation.

Symptoms. Pain in the mouth and swellings. Frequent collection of saliva to such extent that the patient is obliged to spit constantly. Thus the escaping fluid may reach four to seven pounds in twenty-four hours.

The patients usually emaciate, as they take but little nourishment, and what they do take is badly assimilated, because the quantity of saliva swallowed interferes with digestion.

Treatment, In case of children give them an injection of lukewarm water, until their stool is perfectly regular, and wash their mouth with a solution of borax in water, taking one-half teaspoonful from bottle No. 3, to one glass of water; if they are large enough let them gargle with this solution and keep a spoonful of it in mouth as long as they can. For persons over 15 to 18 years of age give at bed time one pill cathartic comp., vegetable, bottle No. 17, and use mouth wash of borax solution.

Sore throat. The predisposition for this disagreeable inflammation varies much with the individual. If exposed to the slightest injurious influences, such as draught, some persons are immediately attacked with affections of this part, while others exposed to the same influences remain well. Among the causes inducing this disease are: Direct irritation, such as very hot substances, rough, ragged bones which stick in the fauces, spirituous liquors, catching cold. Syphilitic persons are nearly always troubled with it.

Symptoms. In acute cases the patient has usually a fever, the secretions are diminished and the patient complains of dryness in the

throat. The back part of the mouth and especially the soft palate appears dark red and swollen. The uvula is thicker and longer and often rests on the root of the tongue.

The disease almost always terminates in early recovery.

Treatment. Take at bed time one pill cathartic comp., bottle No. 17, and repeat if you are constipated next evening. Make a throat wash as follows:

One glass lukewarm water.

Ten drops carbolic acid, 10% c. p., bottle No. 5.

One teaspoonful chlorate of potash, bottle No. 7.

After the latter is dissolved, gargle with the solution every hour. Keep out of cold and draught and wash neck morning and night with cold water, rub thoroughly, dry and cover with flannel.

Pharyngeal croup. It occurs from the same causes as the preceding disease, and can be recognized by white or greyish white spots on the reddened mucous membrane of the soft palate, tonsils and back part of the mouth. The disease occurs nearly exclusively in children and is often epidemic.

Treatment. Keep the bowels open by injections of lukewarm water and use the mouth wash as prescribed for the preceding disease. Should those white spots form a membrane over the larynx, send for a surgeon to remove same instantly.

Inflammation of the pharynx, or Pharyngitis, usually attacks the tonsils, which swell to the size of a walnut; their surface appears knotty, dark red and covered with croupous deposits. The inflammation passes to suppuration, some spot usually becomes softer and more prominent, and finally the pus perforates the thinned walls of the abscess.

Symptoms. The disease generally begins with a high fever, which may be preceded by a severe chill. The general condition of the patient is much affected, the pulse full and frequent, the temperature 104° or over. In this case you have to deal with an inflammatory fever, such as accompanies pneumonia. With the commencement of the fever, the patient complains of a feeling of tension and soreness in throat, and after, of piercing pain, extending towards the ear. It feels to them as if there was a foreign body in the back part of the mouth, hence they make constant attempt to swallow, although this motion increases their pain. The secretion of saliva is often enor-

mously increased; if the patient opens his mouth without spitting the saliva runs from the corners of the mouth. The tongue is thickly coated, the odor from the mouth very unpleasant, there is also the characteristic modification of the voice, its resource is changed, the speech has a peculiar nasal twang, from which the disease can often be detected. On examination of the mouth and pharynx, which is done with difficulty, you will find the tonsils swollen so as to touch each other. While the local symptoms are thus increased for three or four days, the fever grows higher and symptoms of hyperaemia of the brain occur, the patient has severe headache, is sleepless, tormented by horrible dreams, or even becomes delirious. When the inflammation goes down, the local and general symptoms usually subside towards the end of a week and the patient usually recovers in a week or two. When suppuration occurs and abscesses form, there is a certain remission after the symptoms have reached the highest point. The patients often perceive the opening of the abscess only by the sudden relief they experience, or the pus may be swallowed or overlooked; in other cases the opening of the abscess may be instantly recognized by the fetrid odor and the yellow substance thrown out. After the opening of the abscess convalescence is generally very rapid.

Treatment. If detected in the beginning apply of powdered alum bottle No. 1, to the inflamed parts two or three times a day and rinse the mouth with a solution of alum, bottle No. 1, about as much as will lay on the point of a table knife, to a big glass full of barley water, which is made like oatmeal gruel, only thinner, and without spices or flavoring, heretofore described. In addition to above allow the patient small pieces of ice or ice cold water to take into his mouth, and cover the throat with cold compresses, which must be frequently changed. If suppuration occurs use warm poultices, either of corn meal or linseed meal around throat and wash out the mouth frequently with lukewarm water, and open the abscess as early as possible with your finger nail. It must be understood that the patient keeps his bed, that the bowels are kept open, using injection of lukewarm water, if necessary, and that he only takes liquid food, avoiding all meats and fat, while the fever lasts.

THE STOMACH.

Overloading happens often to indiscreet persons and to children, who have their diet watched and regulated too much and when they have a chance to eat to their hearts' content.

Symptoms. Fullness and pressure in the regions of the stomach, flow of saliva and stupid feeling in head. Sour gases evaporate from stomach, heartburn and hickups are also consequences of this indiscretion.

As this trouble generally happens to otherwise healthy persons, it will regulate itself by fasting and giving the stomach a chance to work off its load in the natural channel.

Pain in stomach happens often when digestion is interfered with, such as overloading, or drinking cold water when you are hot.

Treatment. Take a pinch of magnesia, bottle No. 11, in a teaspoonful of water; if you have no relief in twenty minutes, take a very strong cup of coffee and take it as hot as you can without sugar, milk or cream.

Cramps in stomach are heavy pains in the stomach region, and often so intense that the patient swoons, the saliva flows very freely and hickups ensue. The pain is often noticeable in the regions of the navel, chest and back. It occurs mostly in girls or women who have troubles with their monthly period. The duration of the trouble is seldom longer than two hours, and usually ends in throwing off a lot of gases and elimination of large quantities of nearly water-white urine. Cramps in the stomach are very frequent in persons suffering from anaemia, hysteria and hypochondria.

Treatment. Give of extract of ginger, bottle No. 9, one teaspoonful for a grown person, in one-half cup of lukewarm water; also apply to the regions of the stomach the following: Take a piece of cotton flannel and cover the side on which no fur is with tallow or lard and saturate the fur side with oil of mustard, bottle No. 12, and let it lay on stomach till skin becomes red, but do not allow to blister. If the patient is constipated give injection of lukewarm water with ten drops tincture of valerian, bottle No. 24. Persons predisposed to this trouble should use warm clothing and keep their feet warm. Girls and women should keep flannel on their chest and not lace too tight. During their monthly periods they should lay down and not pass around too much. The diet should be easily digestible, eliminating entirely fats, sour and sweet dishes from the list. The meals should be sparingly at a time; better take food oftener when you feel the need of it, so that the stomach never becomes overfilled. The evening meal should be very light, tea and toast without butter is to be recommended. Ladies having trouble of this kind should make it a rule

to avoid the following: Dancing, tight lacing, low cut dresses and mental excitement, but practice "early to bed and early to rise, etc."

Catarrh of the stomach. During normal digestion changes occur in the mucous membrane of the stomach, which, if found in other mucous membranes, would be called catarrh. The secretion of gastric juice is always accompanied by considerable rush of blood to the mucous membrane which is regularly followed by an abundant flow of mucus. This physiological process is accompanied by a slight general disturbance, the so-called digestive fever. Hence the definition that is usually given for catarrh of mucous membranes generally, does not answer for gastric catarrh, and we can only speak of gastric catarrh when the physiological process increases beyond normal bounds. It will be readily understood that, as the act of digestion is repeated several times during the day, and our food is complicated, and sometimes of improper character, the process may readily become abnormal; hence, as may be easily conceived, acute catarrh of the stomach is one of the most frequent diseases. Under favorable circumstances the disease is only of short duration. The predisposition to this affection varies with the individual, in some persons it is induced by exciting causes, which would have no effect on others.

In many cases it is owing to the scanty secretion of gastric juices, which favors abnormal decomposition of the food placed in stomach. Fever patients usually suffer with gastric catarrh, owing to the increased temperature, and the increased loss of water, and retarding the secretion. In such cases, if the patients do not bear in mind, and adapt their diet to the diminished secretion of the stomach, very distressing catarrh of the stomach will result. A large portion of the gastric complications in pneumonia and other inflammatory affections result from neglect of this simple dietetic rule.

Catarrh of the stomach is more readily induced by a slight excess in drinking, in persons unaccustomed to the use of liquor, than those who take a moderate amount daily. Persons who have suffered once from this affection are very liable to do so again if they do not follow correct rules as to eating and drinking.

In grown up and sensible people it does not happen that they simply eat too much; this is far more frequently seen in children, especially among such as have their diet very much restricted, and hence are never satisfied but embrace every opportunity to overload the stomach. Children at the breast hardly have any feeling of satiety.

When nourishment is plenty they usually drink till the stomach is overfilled. If they vomit easily, the overloading is soon removed, and only so much nourishment remains as they can readily digest; if they do not vomit easily, the stomach remains overfilled, and they are affected with gastric catarrh, although they have taken the most suitable nourishment. Nurses know very well that children which vomit often and easily sicken less readily and thrive better than others.

Catarrh of the stomach may also be excited by moderate use of food, which is hard to digest. The indigestibility of food often depends on its shape. Persons who eat with avidity, or who have no teeth, often introduce perfectly digestible food into their stomachs, in a state so that the gastric juice cannot get at it, and which is then slowly absorbed and digestion is retarded. The white of the hard boiled egg and fat belongs to this class of food. It is also caused by eating and drinking food that has begun to decompose before entering the stomach. It may be thus caused in grown people if they partake of spoiled meat or beer, but it is more frequently in children from the use of milk that has begun to sour. This is what renders the nourishment of infants, by artificial means, so difficult in hot weather when the milk begins to spoil so soon. If children do not have their mouths regularly cleaned, or if a sugar teat be given them to prevent their crying, the decomposition of good, fresh cow's milk, or even of the mother's milk, may be commenced in the mouth itself. (Just think of it! How carefully milk cans and dishes must be cleansed and purified of all decomposing substances in order to prevent the milk from spoiling.) If decomposition has once begun in the milk in the stomach, the best milk taken subsequently will act as a poison, as it also begins to decompose.

Acute catarrh of the stomach may also be caused by irritation from taking into it very hot or cold articles, some medicines, *alcohol* and spices. Alcohol acts most injuriously and should be only taken when prescribed by a physician in special cases. Spices in very small quantities aid digestion, while, taken in large doses lead to gastric catarrh.

Catching cold also has a tendency to cause catarrh of the stomach.

Symptoms. The tongue is generally coated, the taste stale and slymy and bad breath, also moderate fever. If the patients fast, and do not expose themselves to any new sources of injury until the stomach is able to fulfil its normal functions, the above symptoms

usually disappear quickly. The abnormally, decomposed contents of the stomach pass through the pylorus into the intestines; the secretion of the irritated intestinal mucous membrane increases, the movements of the bowels are hastened, flatulence rumbling, etc., with griping pains in the belly, occur, and are relieved by the passage of badly smelling gas; finally one or more pulpy stools occur, and the trouble ends. If the patient sleeps the following night, his general health is usually improved, or fully restored. During the affection the urine usually contains some coloring mass making it more dark than usual.

When the injuries, that excite the acute gastric catarrh are more intense, or the patient more sensitive, there is greater nausea, which finally increases to retching and vomiting. By the latter the contents of the stomach are evacuated, more or less changed, with a very acid smell and taste, and usually mixed with a quantity of mucus. The vomiting may be repeated at varying intervals, the longer it lasts the more the matter vomitted is mixed with bile, which gives it a bitter taste and green color. These severe forms of catarrh of the stomach are almost always accompanied by great irritation of the mucous membrane of the intestine. Then there is severe diarrhea, by which green masses are passed, with or without pain. After vomiting and purging, the patient is almost always relieved, and, although, perhaps a little feeble, is usually well otherwise in a few days. If the vomiting and diarrhoea be very bad and continues, the symptoms are those of *cholera morbus*, by which is meant, that the gastric catarrh extends to the intestinal mucous membrane.

Cholera Morbus, prevails most during the hot summer months, and then often attacks a number of persons simultaneously. It is seldom excited, at other times, and then by errors of diet. The cholera attacks are rarely preceded by premonitory symptoms; on the contrary, the patient is usually attacked suddenly, often during the night, with a disagreeable feeling of pressure at the pit of the stomach, which is soon followed by nausea and vomiting. At first the food last eaten is vomited, little changed, but the vomiting is soon repeated, and quantities of pale green or yellowish fluid are thrown up, and very bitter to the taste. After this, or sometimes during the vomiting, a rumbling noise in the bowels is perceived, and, followed by pulpy stools, which soon become thin and liquid. In a short time enormous quantities of fluid are evacuated, the greater the amount, the less color it has, as the bile no longer suffices to color all the mass passing

from the body. The loss of water from the blood excites intense thirst, which is only temporarily quenched by large quantities of drink. The fluid taken into the stomach is rapidly evacuated, either upward or downward. Through the loss of all this fluid, the blood becomes constantly thicker, the secretions, especially of the urine, become diminished, or ceases entirely. The skin appears dry and shrivelled, the patient looks collapsed and disfigured, the nose is pointed, the eyes sunken, owing to the loss of moisture in the connecting tissue. While there is rarely pain in the abdomen, there are very painful contractions of the muscles, especially in the calf of the leg. No matter how threatening the symptoms, how great the collapse and depression of the patient, the attendant must not feel discouraged, for it is of extreme rare occurrence that a previously healthy adult dies of cholera morbus. Usually, after a few hours, rarely not till the next day, the vomiting and purging subside; the skin becomes warm and full, the exhausted patient falls asleep, and only suffers from great depression. In the rarest cases, and only in sickly and weak persons, or in children or old persons, occurs sometimes a fatal termination; then the bowels become paralyzed, the vomiting and purging cease, while the transudation continues; the pulse disappears, the movements of the heart become weaker, the intellect cloudy and the patient dies of exhaustion.

Gastric catarrh during the first years of life presents certain peculiarities. The appearance of the child is little changed, at most it only looks a little pale and has a slight ring around the eyes. Almost always, shortly after nursing, there is vomiting and the milk thus evacuated is not curdled. This sort of vomiting is an important symptom, and is so recognized by both physician and nurse and is a sure sign of gastric catarrh. Soon after the vomiting, or even at the same time, the passage from the bowels becomes abnormal; the stool consists of a very acid, green or greenish-yellow fluid, containing more or less firm lumps, they remind us of the changes that the milk undergoes, after standing for some time, and shows that the gastric juice has not even digested it enough to cause coagulation. The vomiting and purging, which are usually preceded by restlessness of the child, by crying and drawing the legs up towards the belly, occur more or less frequent; and the stool often changes its consistency and color. In the majority of cases, the vomiting ceases after a few days, the undigested milk disappears from the evacuations, the children improve and pick up. When the disease runs a favorable course, the

evacuations become fewer and more normal, the collapse disappears, the temperature becomes more even, the child improves and convalesces, but a great tendency remains to relapse.

If, however, the vomiting and purging does not stop, the temperature is uneven, the trunk and especially the belly are burning hot, while the face and limbs are cold, there is danger. The little ones become sluggish in their movement, even nursing troubles them; they let go of the breast, but eagerly drink water, when it is offered to them. The cries of pain which usually precede the evacuations gradually change to weak whimperings; in the interval the child lies half asleep. As the exhaustion increases, many die; occasionally, shortly before death, convulsions appear.

Cholera Infantum. If the last described symptoms appear very rapidly, and the evacuations come one right after the other, if decided collapse occurs in a few hours, with great depression of the bodily temperature the disease is *cholera infantum*. The thickening of the blood which has taken place in the body, is shown by the unquenchable thirst; older children follow the glass of water with eager eyes, and when it is offered to them, seize it with both hands and hold it tightly until it is emptied. The patient may die in a few hours from this disease, with the above symptoms; in other cases, the cholera proper passes off and a milder form of catarrh of the stomach remains; and, finally, in other cases, rapid and complete recovery takes place from conditions which are apparently utterly hopeless.

Treatment. From the foregoing remarks you will see that in order to avoid gastric catarrh, the diet of some persons, as of fever patients and convalescents, but particularly of infants, must be carefully watched. In the latter case, where it is impossible to give the child the breast of the mother, or a healthy wet nurse, certain precautions must be exercised in the choice of cow's milk, and the following rules should be observed: 1st. The milk must be strictly fresh for night food morning's milk will not do. 2d. Milk from cows fed on oilcake or distillery swill must not be used. 3d. The milk should be sufficiently diluted; the first three months with two parts of water, the next three months half and half. 4th. It should be given at regular, and not too short, intervals. During the first two weeks the bottle may be given every two hours, later, every three or four hours. 5th. The vessel from which the child drinks, as well as its mouth, should be carefully cleaned. Neglect of any of these rules may lead to gastric catarrh or

cholera infantum, while the observation of them will prove protection for the child against the disease.

If the child shows that it is suffering from gastric catarrh, by the characteristic vomiting, prepare the following: Of tincture of rhubarb, bottle No. 26, one-half teaspoonful; bi-carbonate of soda, bottle No. 4, one teaspoonful; granulated sugar to suit taste, not too much, however; pure boiled water, one tumbler full. Mix well and give one teaspoonful every two hours. Only in aggravated cases should it be given every hour.

It is exceedingly difficult to manage the diet of children with acute gastric catarrh, which has been caused and is kept up by decomposition of the contents of the stomach. Milk, which is the most suitable and natural food for children is injurious to them in these cases, because it quickly decomposes. Oat and barley gruel and the other starchy foods sour just as quick as milk. Under these circumstances you should remember that the children do not, in this condition, suffer from hunger, even if we withdraw all nourishment for a day or two, and feed them on fresh water alone, avoiding even the addition of sugar. With the aid of the medicine above prescribed the vomiting and purging will cease, and it will look as if the fasting child was recovering. Then commence to feed it with small quantities of diluted fresh milk. If this be rejected again and again, and you fear danger to subject the child to longer abstinence, give it a teaspoonful of beef essence, which is prepared by cutting lean beef into very small cubes, placing these in a bottle (without adding water) closing it securely and leaving it in a vessel of boiling water for several hours. The collected juice is the essence. Grown persons suffering with gastric catarrh should endeavor to vomit by natural means which will always ease them and eat as little as possible and only fluid food, avoiding strictly, all alcoholic or malt stimulants. Under a careful diet as to eating and drinking, nature will restore the afflicted stomach very readily.

Is the gastric catarrh the consequence of too much wine, beer, whisky, cider or anything in that line, and you have sour belching, take of bi-carbonate of soda, bottle No. 4, as much as will lay on the point of a penknife in a teaspoonful of water; repeat if not better in half hour.

If purging continues give of essence of peppermint, bottle No. 27, 10 drops in water. The patient should keep his feet warm by applying

hot bricks and should take freely of the oatmeal and barley preparation heretofore described, also liquid bread will do him good. During convalescence the patient should be careful of his diet, using light, digestible nourishing food, keep himself warm, guard against exposure to cold and damp and avoid all kinds of intemperance. If in case of acute gastric catarrh, the use of alcoholic stimulants is insisted upon by the patient, the disease usually develops into a chronic state which is very difficult to cure, unless the use of alcohol is discontinued. In such case the patient, when he is thirsty, should drink buttermilk, and when hungry do the same, in fact live for a while on buttermilk exclusively and his stomachial catarrh will be something of the past.

Ulcer of the stomach is caused by poverty of the blood and allowing gastric catarrh to run along without checking it.

It occurs exclusively at the pit of the stomach and if not taken care of will eat through the walls of the stomach and thus permitting the escape of the contents of the stomach into the abdominal cavity, and thus cause fatal peritonitis. In this case they are called round perforating ulcers, severe vomiting, occurring regularly after meals, render it very probable that there is an ulcer of the stomach; the diagnosis is rendered certain if there be also vomiting of blood. Some patients with ulcer of the stomach have decided swelling in the stomachial region, and complete loss of appetite. Regarding the general health of the patient, ulcer of the stomach will soon impair the nutrition, so that the patient is rapidly debilitated and has a pale chachetic look.

Except in the first mentioned case, where the round ulcer proves fatal in a few days or weeks, the course of the disease is usually very tedious, and it may run on for years, the patient suffering many alternations of comfort and distress. Not infrequently in the midst of apparent convalescence, vomiting of blood suddenly occurs, or the affection returns with its former severity years after it had disappeared. Recovery is the most frequent termination of chronic ulcers of the stomach.

The sufferings of the patient gradually subside, the nutrition is fully restored and all disturbances cease.

Treatment. Dietic rules best answer the indications from the disease, The result of the treatment mostly depends on their being strictly followed out. Of course you cannot protect the affected portion of the stomach from injury, as we can an ulcer of the skin; the intro-

duction even of the mildest food excites the mucous membrane and irritates the affected part, however, the coarser and rougher the particles placed in the stomach, the greater the irritation they excite. From this fact, proved by experiment and confirmed by practice, the rule is deduced, that the patient should have the mildest possible, and preferably a liquid diet. You had best try at first an exclusive milk diet and see if it will be borne, which is not always the case. If it comes up, add to the next some stale white bread. There is however, some patients who cannot stand fresh milk at all, but have no difficulty with buttermilk or sour milk. If the patient has a natural aversion against a milk diet, give him rice soup, as heretofore described, and add to it some meat extract. Trommer's malt extract contains the nutritious constituents of malt in a state of solution, and is to be recommended because several spoonfuls of it may be taken daily without difficulty, hence it must be regarded as a valuable remedy. [If you cannot procure same in your neighborhood, write to the publishers of this work and they will furnish same to you at cost price.] Vegetables, bread from unbolted flour, roast or fried potatoes are particularly to be avoided, while potatoes mashed with milk do very well.

Very much benefit can be derived by taking in the morning of Bicarbonate of Soda, Bottle No. 4, as much as will lie on the point of a penknife in a teaspoonful of water. Breakfast should then be taken after an hour and a half and supper not later than six p. m.

A complete cure can also be effected by visiting the thermal springs at Karlsbad, Bohemia, and drinking its waters. For persons, who are unable to do this, the bottled water from these springs can be purchased any where. It should be taken warmed and early in the morning one to two hours before breakfast, on an empty stomach.

Cancer of the Stomach. Of the internal organs, the stomach is the one most frequently affected with cancer, the cause of which is very obscure. Men are more frequently affected than women, and usually between the ages of forty and sixty years. It most frequently attacks the pyloric portion of the stomach.

Symptoms. Cases occur where it is impossible to recognize cancer of the stomach with certainty during life. In other cases an approximate diagnosis of cancer can be made. The patient, if far advanced in life, complains of loss of appetite, of a feeling of pressure and fulness in the vicinity of the stomach, and with these, rapidly

loses strength, requires a dirty yellow color of the face. It takes a good physician to make a complete diagnosis of the case, and to administer such palatives as will ease the sufferer. This is also to be recommended for the reason that the relatives need not reproach themselves, for having failed to do their duty. The only termination of cancer of the stomach is death.

Spasm of the Stomach, is a painful nervous affection of the stomach.

Symptoms. Suddenly, or after a precedent feeling of pressure, there is severe, griping pain in the pit of the stomach, usually extending to the back, with a feeling of faintness, shrunk countenance, cold hands and feet. The pain becomes so excessive that the patient cries out. The abdomen is either puffed out or driven in. The attack lasts from a minute to half an hour; then the pain gradually subsides, leaving the patient much exhausted, or else it ceases suddenly with eructation of gas or watery fluid, with vomiting, with a gentle, soft perspiration, or with the passage of reddish urine.

Treatment. Give at once five drops Tincture of Valerian, Bottle No. 24, in a teaspoonful of water, and as soon as pain lets up a little, administer one pill Assafoetida 2 gr., Bottle No. 20. It is also well to apply hot woollens to the stomach during attack. Light diet for three or four days and an occasional hot foot bath will prevent return of disease.

Dyspepsia is state of the stomach, in which its functions are disturbed without the presence of other diseases, or if others are present, they are of minor importance. It is caused by irregularities in diet, such as indulgence in the luxuries of the table, partaking of rich, highly seasoned, heavy food. Eating too hastily and chewing the food badly are also causes. It can and is frequently induced by drinking too much coffee, tea or alcoholic liquors. Insufficient bodily exercise, excessive bodily or mental exertion, late hours, exposure, business or family troubles, and other disturbances, either bodily or mentally, have a tendency to fasten this most disagreeable disease upon a person.

Symptoms. They vary greatly, both in character and intensity, but there is commonly one or more of the following: Poor appetite, flatulence, nausea and eructations, bringing up acid or bitter fluids from the stomach, coated tongue, foul taste and breath, heartburn, pain, sensation of fulness, after even the lightest meal, irregular stool, headache, diminished mental energy, low spirit, palpitation of the heart and a general uncomfortable feeling.

The different forms of dyspepsia may be included under two heads; the digestion is impaired either because the gastric juice secreted is of abnormal quality or because the movements of the stomach are diminished, and consequently the food in the stomach is not sufficiently mixed with the gastric juice. Digestion, which is a clearly chemical process, can only be influenced by the nerves when they modify the secretions, or the movement of the stomach, and in this sense we have nervous dyspepsia.

Treatment. Above all, a mode of life that improves nutrition and the occasional taking of a pill of Bland's Ferruginous, bottle No. 18, and bathing in salt water, either at home or on the sea coast, lots of out door exercise has a beneficial effect. If the dyspepsia is accompanied by irritability or sensitiveness of the stomach, take a handful of hops and steep it in boiling water, and take of it after cooling teaspoonful doses. In cases where the food lies undigested in the stomach it shows that there is a scanty secretion of gastric juices, which the large majority of people try to help along by taking large quantities of spices; while this may help in the beginning, the stomach will soon become used to it and no benefit is derived from the same. In such cases take immediately after meal one two grain granule of pepsin sacharat, bottle No. 21, which will dissolve the food placed in stomach.

When dyspepsia is noticed in the beginning of the ailment, the following plain remedy will usually effect a lasting cure, but not, however, if the disease is of long standing.

Essence of peppermint, Bottle No. 27, one teaspoonful;

Bi-carbonate of soda, Bottle No. 4, one teaspoonful;

Pure water, three-quarters of a tumblerful.

Mix well and cover.

Take of this mixture one tablespoonful 30 minutes before each meal and on retiring at night.

Sufferers with dyspepsia should carefully observe the following rules: Mental or bodily work should not be resumed immediately after a full meal, it is also very injurious to set down to a meal, when completely exhausted from work. Always rest yourself for a few minutes before you eat. Take plenty of gentle, healthful exercise, eat your meals at very regular hours and nothing between meals; use no tobacco, tea, coffee, and alcoholic drink; avoid mental excitement.

Hot bread and biscuits are seeds of dyspepsia, they must be stricken

from the bill of fare. Do not drink, more, than you positively must at meal times, and then have the liquid you take slightly warmed.

Dyspeptics should as a rule avoid all vegetables except rice boiled nearly to a jelly, and potatoes both sweet and irish, they are best baked dry. Of perfectly ripe green fruit and stewed dried fruit, the patient may partake moderately. Fresh milk and buttermilk is good food for dyspeptics, All fresh meats, but the lean only, if broiled or roasted without fat is the best food for the patient, pork of course must be eliminated from the list. All meats should be kept in a cool place for some days before being cooked. Milk and hot water and weak black tea are the best drinks for dyspeptics.

Intestinal Catarrh, or inflammation is one of the most frequent of diseases and is usually accompanied by liver troubles.

Symptoms. In acute intestinal catarrh, besides cold perspiration, there is acceleration of the movements of the intestines, so that the passages are not only more fluid, but they become more frequent. Diarrhoea which is often preceded by rumbling in the intestines is the most constant, and occasionally the only symptom of intestinal catarrh. Pain and other symptoms may be absent, evacuations should not be too copious and long continued. In such cases, diarrhoea must not be considered as a favorable symptom, and that it has a tendency to cleanse out the body. The color of the fluid passed is usually some shade of green owing to the bile being passed off with the stool. In some cases there is besides diarrhoea, pains in the abdomen. These are chiefly periodical attacks of griping pain or colic, during which, if the pain be severe, the patient becomes very pale and cool. These colicky pains, usually subside, when a discharge from the bowels has just taken place, or is about to occur. In acute intestinal catarrh the abdomen is somewhat prominent, and quantities of badly smelling gases escape with the passages. It is usually caused by disturbed digestion and catching cold.

Treatment. If the result of cold the patient should be put to bed, should take one teaspoonful of essence of peppermint, Bottle No. 27, two teaspoonfuls of sugar and one cup of boiling hot water, drinking the mixture as warm as possible, repeating the dose in half an hour if not relieved. The abdomen should be covered with warm woollens. Children up to ten years, one quarter of above dose, up to fifteen, one-half, others full dose. Patients suffering from chronic intestinal catarrh, caused by damp, cold climate, should wear woollen stockings

and flannel bandages around abdomen. When chronic intestinal catarrh in children is due to improper nourishment, the casual indications require the regulation of the diet, and attention to this will often be crowned by brilliant success. While the diarrhoea lasts, the child will rarely stand a milk diet, meat broths suit best, but still better, finely shaved raw beef, taken with a little stale white bread or toast. Under this treatment, the diarrhoea, which had previously withstood all remedies, often ceases in a short time, and the emaciated child soon recovers. If the stool in the beginning of the disease is sluggish and it feels as if a plug was lodged in rectum, let grown people take one Pill Cathartic Comp. Vegetable, Bottle No. 17, at bed time; for children an injection of warm water will answer the purpose. If after applying the remedies here given, the diarrhoea has continued for, say twenty-four hours, it must be stopped and the following plain remedy will invariably do it.

Take two tablespoonfuls of flour and parch it in a skillet till it is of a rich chocolate color, (do not let it burn,) add to it one pint of boiling water and stir smooth, or put it through a fine strainer, season with a little salt. When it is luke-warm, allow patient to drink of it all he wishes, even to the extent of the whole dose. If they object to the taste, a little sugar makes it quite palatable, but if it can be taken without it, it is so much better.

Ulcers of the small intestines. Is a similar affection as the ulceration of the stomach and requires a like treatment.

Habitual Constipation. Some persons habitually, only have a passage every second or third day, and still feel very well, or feel worse when they have more; on the other hand, others feel sick if they do not have one or two stools daily. The cause of this difference depends partly on the fact that the first form but little excrementitious matter, as they eat food, containing but little indigestible material, and as they perfectly assimilate the digestible part of the food; while the latter have a quantity of excrement, because their food contains much indigestible material, or because their power of digestion is impaired. Occasionally patients have an unsatisfactory feeling after stool; they feel as if there were still masses in the intestines, which should have been passed. This feeling alone gives them great discomfort, and puts them in a disagreeable frame of mind. Men with habitual constipation may have frequent erections and seminal emissions; if they were previously worried about their feelings, they are

absolutely frightened by this symptom. The disease occurs more frequently in women than in men, and not infrequently develops in growing children. The bad habit of repeatedly restraining the faeces forcibly, induces habitual constipation in some cases. Sedentary habits are likewise properly classed among the exciting causes of this affection. Still it is remarkable, that perseveringly walking does not, by any means, render defaecation as easy as might be expected. Patients with habitual constipation usually become indefatigable walkers without thereby attaining the goal, which is often the object of their whole desire and endeavor. People, who have led a luxurious life often suffer from habitual constipation. We often meet persons, who in their youth, were most jovial and popular fellows, and, through a sedentary life, in a very few years, become ill-tempered and peevish, and have no thought beyond, whether they will have the longed for passage to-day. The excessive stretching and relaxation of the abdomen remaining after frequent pregnancies, particularly after twins, nearly always causes habitual constipation.

Treatment. It must be limited to a diet, which will leave little undigested matter. The patient should live on eggs, strong broths and pure muscular meat (lean only.) His stool must be forced by frequent injections of luke warm water and about once a week at bed time, two pills Cathartic Comp. Vegetable, Bottle No. 17. It will then soon mend. Children should be exclusively treated by dietary means, plenty of ripe fruit and lean meat. If the wanted stool does not come after two days, give a good dose of castor oil.

Haemorrhoides or Piles is a varicose dilation of the veins of the rectum and bleeding from these blood-vessels. It is one of the most frequent of affections. The varicosities of the rectum, or piles, as they are usually called, occur mostly at the anus and farther up, thus distinguishing external and internal or blind piles. At first the piles are very small, but later on they attain the size of a cherry or even larger. Bleeding piles are the result of ruptures of the varices from the force of blood pressing into the dilated vessels.

Symptoms The patient has feeling of burning and tension in the rectum, just as occurs in other mucous membranes in acute catarrh or relapsing chronic catarrh. There are also severe pains in the lower portion of the backbone. The general state of the patient is disturbed, he becomes relaxed, sluggish and depressed.

The local difficulties that the piles excite, vary with number, size

and fulness of the same. At first they are slight, the patients have the feeling of a foreign body in the anus, and pain only occurs when there is a hard stool. When the anus is surrounded by large varices, or when individual tumors have become very large, and are very tense, the patients have constant pain, cannot sit down, and even a soft passage gives them great suffering, which only disappears slowly, and which not infrequently causes the patients foolishly to retain their passages. The pain becomes most severe when large varices are protruded through the anus, strangulated there, and become inflamed. The causes of the unpleasant feelings of the patient at one time, and his comfort at another, may often be discovered. The occurrence of constipation has obstructed the escape of blood from the rectum, or a debauch has overfilled the portal vein, the consequence of which is a congestion of the haemorrhoidal blood vessels.

Treatment. The use of meat and egg food must be limited and the patient should eat only once a day a little of meat or egg. The diet should be of vegetables, fruit, well boiled rice and such articles. The patient should take long walks and indulge in energetic muscular exercise and drink plenty of pure water. The use of spirituous liquors of all kinds, tea and coffee must be stopped. If stool is difficult let the patient take a good dose of salts. The patient should take every morning the following preparation:

Take of sulphur, bottle No. 15, one tablespoonful, and of cream of tartar, bottle No. 6, one tablespoonful, mix well in dry state and add to it one cup full of pure sugar syrup; of this mixture one teaspoonful should be taken every morning. The anus should be well washed at least three times every twenty-four hours, and if the piles protrude or are itching in the rectum, the following ointment should be used:

Take of alum, bottle No. 1, one teaspoonful, and of vaseline, bottle No. 14, two tablespoonfuls; mix well and apply to the diseased parts.

Piles that have come down and been strangulated should be replaced by continual careful pressure with a bit of oiled linen, while the patient rests on his knees and elbows, with the body bent forward. Inflamed piles should be covered with cold water compresses or bladders filled with very cold water. When piles will not succumb to above treatment a surgeon should be consulted with a view to have an operation performed.

Colic of the intestine is a nervous affection of the intestines.

Symptoms. There are attacks of pain spreading from the naval over

the abdomen, alternating with intervals of ease. The pain is tearing, cutting, pressing, most frequently twisting, pinching, introduced and accompanied by peculiar bearing down pains. The patient is restless, and seeks relief by changing his position, and in compressing the abdomen, his hands, feet and cheeks are cold; his features are pinched; the wrinkled brows and contracted lids betray his agony. The pulse is small and hard. The skin of the abdomen is tense, whether puffed up or drawn inward. There is usually constipation, but sometimes the bowels are regular, or even too loose. These attacks of colic may last from a few minutes to several hours, relaxing at intervals. It ceases suddenly, as if cut short, and there is a feeling of the greatest relief.

Treatment. Give at once one Pill Assafoedida, 2 gr., Bottle No. 20, and one dose Phenacetine Bayer, 2 gr., Bottle No. 23. This will relieve the pain almost instantly, and within fifteen minutes after, give castor oil in large doses, say two tablespoonfuls, for a grown person, till the bowels are evacuated. The bowels should be kept warm, by means of hot woollens or warming bottles. The diet for a few days after an attack should be very light.

Worms. The worms most frequently found in the human intestines are the tape worm, which is from ten to twenty feet long and of a yellowish white color. It is divided into head, neck and body, the latter consisting of many hundreds of links. The tape worm inhabits the small intestines, but may enter also the large. There are cases on record, where one person harbored more than one tape worm, however, only in exceptional cases.

The *round worm*, is cylindrical, pointed at both ends, from six to twelve inches long and from two to three lines thick. The round worm inhabits the small and large intestines, but makes excursions in various directions and may enter the stomach and even the gullet and is then vomited. From the duodenum it occasionally makes its way into the bile ducts. They often occur in incredible numbers. When existing in large numbers, the worms cause much irritation, and are occasionally passed in balls rolled together. It is most frequent in ill fed children from 3 to 10 years of age.

The *thread or maw worm*, is a small worm about as thick as twine. The head of the thread worm is enlarged by wing-like attachments. The usual seat of this worm is the lower part of the intestines, particularly the rectum, they do, however, enter sometimes the small

intestines. They often crawl out of the anus and enter the vagina.

These parasites living in the intestinal canal, originate from eggs, and have reached the intestines in that state, or one further advanced, and are mostly carried to it by the use of indifferently cooked fresh or salt pork and the flesh of the goat. It is a well known fact that people, who abstain from the use of pork, such as Jews and Mohammedans, are never afflicted with tape worms, and when they are, it can always be traced to one of the transgressions of their religious code.

Symptoms. The symptoms excited by intestinal worms vary greatly with the peculiarities of the person affected. Frequently there are no signs till worms, or fragments of worms, are passed at stool. This is chiefly true of tape worms. Many patients with tape worms enjoy the best of health, have neither stomach ache or other pain, and the links pass away, from time to time, and through it alone, their attention is called to the disease. In other cases, the patient complains, from time to time, of severe pain in the abdomen, which is usually described of a twisting and turning nature. By pressing against the abdomen the patient will have nausea and often vomiting. The secretion of saliva is almost always increased to such an extent that the saliva flows from the mouth. These attacks, particularly when they occur after eating herring (salt) onions, horseradish, or large grained fruit, are considered as certain signs of tape worms, however, before beginning treatment, these symptoms should be substantiated by the passing of links of the tape worm, while having a passage, either spontaneously or after the use of a laxative. In other cases again, the presence of tape worm is not so well borne, particularly after eating salty or spiced food, there is diarrhoea, and the patient becomes weak, pale and thin. This occurs particularly in persons previously debilitated, especially in children and young girls.

The irritation of the tape worm may be reflected to other nerves, but the frequency of nervous affection from this cause has been much exaggerated.

The sensation of tickling in the nose, which induces the patient to rub and pick that organ, dilation of the pupil, squinting, grating the teeth, and other unimportant disturbances of innervation, are rather attributed to the round worm, while the tape worm is blamed with more severe and extensive nervous affections, particularly epilepsy and St. Vitus' dance. Some hope may be entertained in epilepsy, oc-

curring without any perceptible cause, depends on irritation from worms, but be not too sure in the belief that the passage of links of tape worm from an epileptic patient proves that the disease depends on the presence of the worm, and will disappear with the removal.

As a rule, the presence of round worms in the intestines excites no symptoms. They are so very common that, if the intestinal canal were much irritated, and nutrition greatly impaired by their presence, there would not be so many healthy and blooming children. If there be a large number of them in the bowels, they may curl up together, and form an obstruction, as hard faeces sometimes do, or cause colicky pains, if they do not uncurl or can not be removed by a dose of salts, they may induce symptoms of complete obstruction in the intestines, accompanied by an uncontrollable constipation and griping pain in the bowels. These round worms enter occasionally the stomach, as said before, and are the cause of great nausea and discomfort; the little patient cannot describe the feelings, and the mother is perplexed until a vomited worm solves the riddle. It has even happened that a worm in the stomach is quite unfelt, and may even crawl, unperceived, from the mouth during sleep. If the round worm finds its way into the bile duct, there occurs an obstruction and serious liver complaint.

When the thread or maw worm approaches the anus, or crawls out of it, its incessant motions cause a very troublesome itching. This usually increases late in the evening, and during the night, and usually interferes with sleeping. Besides the itching there is an incessant desire to go to stool. In the evacuations, which are often mixed with mucus, the worms continue their shaky motions. If they crawl into the vagina, they cause annoying prickling and itching there also. The irritation from the worms and from the rubbing they induce, may cause catarrh of the vagina, and often mothers imagine that their little girls have the whites.

Treatment. In case of tape worm it is essential and follows as a matter of course, that no pork should be eaten, under the same ban is raw sausage or goat meat. To successfully expel the tape worm a preparatory treatment is necessary. Let the patient live moderately, keep his bowels open with castor oil and let him live for a few days on salt herring, smoked fish, onions, horse radish and other salty and spicy food. If in season the patient should freely, eat of strawberries, huckleberries, raspberries, etc., the numerous seed of these fruits appear to sicken the worm. After having dieted in this manner, take

a half pint of pumpkin seeds to a pint and a half of water; steep to a pint; when cool drink one third of it, on an empty stomach, and balance of the decoction in 2 or 3 hours doses. If the worm does not move repeat next day and follow with a dose of pill cathartic comp. veg., bottle No. 17, taking about 3 at a time. During this cure hardly any food should be taken.

Turpentine, bottle No. 13, is one of the most certain remedies for tape worm, it should, however, only be used in case of necessity, not only on account of its disagreeable taste, but because in the requisite doses it is apt to irritate the urinary organs. It is administered as follows: After living for a few days upon the food above described, give from one to two ounces of turpentine alone, or mixed with honey or castor oil in one dose at bed time. It is a sure cure, but owing to the dissagreeable taste and interference with the urinary apparatus, the disease is about as easily borne as the cure.

The publishers of this work are also in possession of a specific remedy for tape worm, but owing to its nature it has to be prepared fresh every time, as it will not keep longer than a fortnight, but they will be pleased to furnish it to any sufferer with tape worm, upon application.

For round worms, give one granule of santolin, bottle No. 19, and follow it up with a dose of castor oil.

The same treatment should be given in case of thread worms, but instead of the castor oil, give an injection of cold water, with a little pure cider vinegar in it. The injection should be a good large one in order to reach the farther portion of the large intestines, and be followed up until the stool shows no more worms.

Gastric fever, *Bile fever*, is a disease running an acute course, in which high fever is accompanied by dyspeptic symptoms and diarrhoea, while none of the important organs seem to be seriously affected.

As a rule, gastric fever begins with several slight chills, rarely with a severe one. The pulse rises quickly to one hundred or more. The constitutional disturbances are very marked. The faintness is so great that the patient remains in bed; the limbs, particularly at the joints, pain "as they would burst." The insupportable headache is usually increased by laying the head on a feather pillow, while it is occasionally relieved by binding a towel firmly around the head. The patient does not sleep at all, but when he does, is disturbed by dreams.

The appetite is usually lost, the tongue coated, the taste slimy and bitter, the patient complains of a feeling of pressure and fullness in the stomach region, and is very sensitive to pressure there. There is also eructation of gases and fluids, of an acid taste, occasionally there is repeated vomiting. At first there is constipation, but later, when the disease is protracted, there is diarrhoea, preceded by more or less colicky pain; the stool is fluid and of a greenish color, caused by the passage of bile.

Occasionally these symptoms pass off quickly, and the patient who is one day in a sad plight, feels quite well the next. Often little blisters form around the corner of the mouth. The disease does not always terminate in one day, but often continues during several days; very seldom longer.

Treatment. Give as soon as fever abates, one pill, comp. cathartic vegetable, bottle No. 17, and next morning after stool every two hours till 2 p. m., one pill quinine, 2 gr., bottle No. 16. Light diet, well ventilated room; as a drink use oatmeal gruel with lemon juice.

Sores on anus is often the case with fat people and if not looked after will form into fistules.

Treatment. Take of carbolic acid 10%, bottle No. 5, one tablespoonful, pure rain or boiled water, 10 tablespoonfuls and wash with the mixture the afflicted part. This is also a good remedy for chafing on and around anus, and sexual organs.

Cancer of the rectum is a very dangerous disease and is better left to the family physician, little hope for a permanent cure can be entertained.

Inflammation of the Peritoneum or Peritonitis is a very dangerous disease and among the exciting causes are the following:

Severe contusions and penetrating wounds of the abdomen, surgical operations, as for hernia and on the stomach. Ruptures or perforations of the organs covered by the peritoneum and the entrance of foreign bodies into the abdominal cavity. Thus perforating ulcers or cancer of the stomach, ulcerations of the vermiform process, for instance when seeds lodge in it, scrofulous ulcers of the intestines, perforations of the gall or urinary bladders, abscesses of the liver or spleen, all may cause this dangerous disease. In all such cases the inflammation spreads with the greatest rapidity. It may also and in fact is, often caused by the spreading of inflammation from the female sexual

organs, and lastly, it may be caused from catching cold, this however is not the case very often in persons who have been previously healthy. In this latter case it is usually called rheumatic peritonitis.

Symptoms. The same vary with the causes that induce it. Peritonitis, caused by wounds, usually begins with severe pain at the seat of the injury, which quickly spreads over the whole abdomen. In peritonitis from perforation also, excessive pain over the whole abdomen. In peritonitis from perforation has occurred suddenly and foreign substances have entered the peritoneum. At first along with the pain, there are symptoms of great general depression, and after it, there is a severe fever. The commencement of acute peritonitis, where the inflammation is propagated from neighboring organs is far less striking. The pain already existing is gradually increased; it is at first restricted to the seat of the affected organ, and thence spreads gradually over the entire abdomen. In rheumatic peritonitis it is only that severe chills and intense fever occurs at the outset of the disease, No matter however, how the disease begins, whether there is fever at first or later on, or what its cause is, pain is always the most troublesome symptom. An slight pressure in the abdomen increases it, even the pressure of the bedclothes may become unbearable. The patient does not toss about in bed, as he does in colic, but lies on his back with the knees drawn up and dreads every change of position. The slightest cough causes a distortion of the countenance, from pain, the patient speaks low and carefully and does not breathe deep, fearing the incident pain. The abdomen soon becomes tense and puffed up. At first the distension depends but little on filling of the abdomen with exudation, and is mostly caused by distension of the intestines, which are filled with gas. In most cases of peritonitis the patient is obstinately constipated. If it is caused however from inflammation of the female sexual organs, there is usually watery diarrhoea. If such patient is set up in bed, or is pressed strongly on the abdomen, watery, slightly colored masses pass from the anus. Besides the foregoing symptoms, there is often vomiting. At first the vomited masses are mucus and colorless, later they are more watery, greenish or even intensely green. If the inflamed parts extend to the bladder, there arises an intense desire to urinate, and a feeling of fulness in the bladder. Fever is one of the symptoms of the disease, and if it does not begin with it, it occurs in the earlier stages. The pulse is very frequent and small with a very high temperature, often arising to 105 ° F. The general state of the patient is much affected, but the mind is

usually clear. In severe cases the above symptoms become very decided in a few days. But the pain is usually worse at first and subsequently diminishes. The belly is inflated like a drum, the liver and the point of the heart are often pressed up as high as the third rib. The anxiety of the patient is very pitiful; he beseeches aid, and looks perfectly desperate. Finally the mind becomes cloudy, the patient grows delirious, the pulse is smaller and more frequent, the body covered with cold sweat, and at the end of the first week sometimes even sooner, the patient succumbs to the disease.

If the disease takes a favorable course, which usually occurs only when the physician succeeds in removing the exciting causes, or when these are not very grave, the pain and fever gradually subsides, respiration becomes freer and the patient may recover rapidly. But the disease, after recovery leaves its mark nearly always during life in the shape of habitual constipation and colicky pain before stool.

Treatment. As soon as the first symptoms show themselves give of one or in strong pain two doses Phenacetine Bayer 2 gr., Bottle No. 23, which will alleviate the pain and send for a first-class physician, to direct further treatment. While not a great deal of hope for recovery can be extended, even by the best medical practitioners, you have the conviction that you have done all you could, and when the patient passes away under the doctor's care, you need not make yourself any reproaches. The diet in case of peritonitis must necessarily be a very light one. Toast water; weak gruel and the like.

Congestion of the liver. May be caused by determination of the blood to the organ or obstructed outflow from it. The predominant cause is the habitual use of alcoholic liquors, and excessive eating.

Symptoms. Headache, difficult digestion, irregularity of the bowels, and a general uncomfortable feeling in right side.

Treatment. Light diet, the use of alcoholic liquors must be abandoned. Take at bed time one Pill Cathartic Comp. Vegetable Bottle No. 17 and after a good stool, which will follow from this take one Quinine Pill 2 gr., Bottle No. 16, and thereafter exercise care in your eating and drinking.

Inflammation of the liver is a disease which is hard for a layman to diagnose, as no certain rules and symptoms can be laid down for his guidance and the treatment of it should be left to a regular practitioner who understands his profession, and even the best of them generally make little headway.

Syphiloma of the liver. Among the internal organs of the body, the liver appears the most frequently affected by constitutional syphilis; syphilitic diseases of the liver is often found in children, who have inherited it from their parents.

The disease can seldom be recognized during life and it is out of the question to treat same, and even if its symptoms could be established, remedies would be of no avail, as, in the best developed cases, it shows itself only towards the end and at a time when recovery is impossible.

Attention is only drawn to the fact that parents cognizant of the disease in themselves, not only in liver, but general syphilis, commit a moral wrong, in being instrumental in the propagation of offspring who are doomed to suffering and early death, before they are born.

Fatty liver. The circumstances under which a fatty liver occurs, is found along with an excessive production of fat throughout the body, where the supply of nutriment is excessive and its consumption limited. As a usual thing persons affected with fatty liver are chiefly those who exercise but very little, while they eat and drink a great deal. By this mode of life they are subjected to conditions analogous to those under which animals are placed with a design to fatten them.

Symptoms. In most cases of fatty liver there are no subjective symptoms, and it takes a good physician to make a correct diagnosis. In fatty liver of a high grade, as occurs particularly in toppers, there is usually a feeling of fulness in the right side. If the abdominal walls and the omentum be also fatty, the fulness of the abdomen and the tension of its walls may cause trouble in respiration. In such cases the secretions from the sebaceous glands is usually so increased that their skin shines with fat, and when the sweat, the perspiration runs from their skin in large pearls, this condition of the skin, which is due to the same state of affairs, as the fatty liver, may be mentioned as one of the symptoms.

As fatty liver rarely causes any trouble, when in the lower or medium grade of the disease, not much notice is taken of it. In the highest grade it interferes seriously with the formation of the bile and consequently we find impaired digestion and the bile, not being taken from the blood, remains as a component part, causing other diseases.

Treatment. In toppers and gluttons, the indications imperatively demand a change of the mode of life. General advice is of no use, as it is badly followed. They must take hours of bodily exercise, must not

indulge in afternoon naps, give careful directions about their meals, all gravies and other fatty substances of whatever nature, must be eliminated from their diet. For supper, at most a thin gruel and a little stewed fruit. The use of tea and coffee must be limited to next to nothing, and if they can possibly do without it, so much the better. Alcoholic liquor, wine, beer, hard cider, medicinal bitters, in fact anything, which contains the least bit of alcohol must not be touched or tasted. Medicines have little or no tendency to reduce the fat in liver and lasting benefit can only be derived from a change in mode of life. In case of costiveness endeavor to relieve it by the free use of fruit, or take every morning till relieved a pinch of cream tartar, bottle No. 6, in a tablespoonful of water one-half hour before breakfast.

Cancer of the Liver, belongs to a class of diseases where cures are never effected, life may be prolonged but with it a terrible suffering. To avoid many disagreeable consequences call in the family physician.

Jaundice, is an obstruction of the bile ducts in the liver. The gall ducts have no contractile element to urge their contents onward. The forces that pass the bile along its ducts are so weak, that they cannot overcome even the slightest obstacle, and a very inconsiderable obstruction to the evacuation of the bile suffices to cause it to collect in the liver, and thus induce retention of the bile. Pregnant women are frequently subject to jaundice. Catching cold, or the stoppage of periodical menses will also cause it occasionally.

Symptoms. Yellow tinge, first of the whites of the eyes, thence at the roots of the nails and next the face and neck, and finally the trunk and extremities. The urine becomes yellow colored or even brown, and stains the linen; the stools are pulpy and of a whitish grey color; there is usually constipation, lassitude, anxiety, pain in stomach, bitter taste and feverish symptoms. There are also, usually, depression of spirits, prostration of strength and slowness of pulse.

Treatment. Requires first of all, an improvement of the depressed state of the patient by a proper diet. Cold meats and strong soups are particularly well borne by patients suffering with jaundice. Fat is not absorbed when the bile does not enter the intestines, and consequently is not well borne, the use of rich gravies, bacon, ham, butter or anything of a fatty nature must be strictly avoided. In the next place, you must attend to constipation, from which most patients with jaundice suffer, and which partly depends on the dryness of the faeces, and partly on the absence of bile in the intestines. Children

and especially young girls should be given when in the least constipated ten drops of tincture of Rubard, bottle No. 26, in sweetened water and grown persons should take at bedtime one Pill Cathartic Comp., bottle No. 17. If the urine is very dark and its color is towards a greenish tint, give 5 drops Oil of Turpentine, bottle No. 13, alternating it with a small pinch of Cream of Tartar, bottle No. 6, to be taken in sweetened water. When the biliary obstruction has been removed bathe the patient in strong soap baths, which will relieve the itching sensation and lessen the jaundiced color of the body.

Gall stones and their consequences. These so-called stones are hard substances, of an uncertain origin, which pass through the bile ducts into the intestines.

Symptoms. Gall stone colic begins unexpectedly and suddenly at the moment a concrement passes from the gall bladder to the bile duct and becomes packed in there. The patient is seized with a piercing or griping, insupportable pain, which starts from the right side and spreads over the whole abdomen, often also to the right chest and even to the right shoulder. The abdominal muscles are cramped and very sensitive to pressure; the patient sigh and moan, double up and roll about on the bed or floor. During all this there is no fever, but there are a number of other symptoms, the pulse becomes small, the skin cool, the face pale and distorted, sometimes the patient actually faints. In some cases the patients are affected with spasmodic trembling or chills; in other cases there are convulsions either general or limited to the right half of the body. There is most frequent obstinate vomiting. After a few hours, or in severe cases not till the next day, the sufferings of the patient are usually moderated and the general disturbances quited. This remission, during which, however, the patient still suffers severely, and still has a small pulse, and pale cool skin appears to correspond to the passage of the stone from one branch of the bile duct to the other, which is a little wider. However, the general symptoms do not change greatly till the stone has entered the intestines. Then the patient is entirely free from pain and uneasiness, the pulse rises, the warmth of the skin returns and the distortion of the countenance disappears. Very rarely does gall stone colic terminate fatally.

Treatment. At the appearance of the first symptom, give of Hoffman's Anodyne, Bottle No. 25, 30 drops on a piece of loaf sugar or in some sugar water, let the patient have little pieces of ice, or very small draughts of ice water and put dry, hot woolen clothes on right

side, over the liver. Give an injection of luke warm water, about a pint, adding to it, twenty drops of Tincture of Valerian, Bottle No. 24, and see that the patient has in consequence a good passage, repeating the latter if he fails to have a voluminous stool. If in one hour the pain has not subsided, repeat the does of Hoffman's Anodyne, adding to it 20 drops of oil of Turpentine, Bottle No. 13, and if possible put patient into a warm bath, keeping him there for about an hour, adding hot water as it becomes cool.

The main thing in this disease, however, is the prevention of repetition and it can only be regulated by the diet and a well regulated stool. All sweet things and fat must be avoided by the patient and especially should he avoid wheat bread, substituting rye or graham instead. Plenty out door exercise is also necessary.

After an attack of gall stone colic a mild laxative, Tincture of Rhubarb, Bottle No. 26, one-half teaspoonful in sweetened water ought to be taken, in order that the system gets rid of the stone now lodged in the intestines.

Injections of luke warm water are also to be recommended and may be substituted for the Rhubarb.

Diseases Of the Respiratory Organs.

NOSE.

NOSE. *Inflammation of the mucous membrane, Catarrh, acute and chronic. Cold in the head. Sore throat.* The functional disorders characteristic of catarrh are to be seen frequently in the nasal mucous membrane, where they are usually called cold in the head, or nasal catarrh. Predisposition to cold in the head varies greatly in different individuals. As a rule, it is greater in children, and in feeble, delicate, and above all, in scrofulous persons, than in adults, and in individuals, who are muscular and robust.

The causes, which occasion catarrh of the nose are very numerous, it is erroneous, however, that "colds" are invariably the cause. However, numerous cases can be traced to it, especially to exposure of the feet, such as getting them wet, etc.

Local irritants cause catarrh, such as entrance of hot air, dust, acrid gases or foreign bodies, or the snuffing of tobacco by persons not used to it. Blows and shocks, which the nose may encounter and often repeated and violent blowing of the nose are also causes.

It may also be attributed to inflammations of mucous membrane of adjacent parts and spreading to the nose, such as boils on the upper lip or abscess on the upper gums. Nasal catarrh is also often a symptom of constitutional disease. That the disease is contagious is erroneous.

Symptoms. For the reason that nasal catarrh is so generally known; and, everybody, having had a personal experience of same, the symptom need here but brief notice. The patient first complains of a feeling of dryness and of a more or less complete obstruction in one or both nostrils, which induces a very prejudicial inclination to blow the nose.

From time to time there arises a prickling sensation in the nose, and which usually precedes sneezing. The dryness of the nostrils is soon succeeded by a very abundant secretion, a colorless transparent watery liquid, of saltish taste, flowing almost incessantly from the nose, and sometimes forming an abrasion on the upper lip. The senses of smell and taste become somewhat perverted and the tone of voice is nasal. In aggravated cases, the patients complain of a feeling of pressure or of distressing pain in the forehead. The redness and the swelling of the mucous membrane can be perceived as far as the eye can reach. A cold in the head is often complicated by eye troubles. The patients avoid the light and copious tears flow from the reddened eyes into the nostrils and over the cheeks. Should the back part of the mouth participate in nasal catarrh, there is difficulty in swallowing, if the air passages are implicated, cough and hoarseness accompanying the symptom. In strong cases of catarrh, a slight pain and roaring in ear, or a temporary hardness of hearing occurs.

These symptoms, as described, are almost always accompanied by fever and general constitutional disturbances, particularly so, if the catarrh has spread over a great surface. The duration of nasal catarrh is usually short, and in most cases the disease terminates in complete recovery on the fifth, sixth or eighth day. It is very rarely, and only in scrofulous patients, that a cold in the head becomes protracted and changes from an acute to a chronic catarrh.

While acute nasal catarrh is a complaint as common as it is harmless, it sometimes proves dangerous to infants at the breast, because their obstruction of their nasal passages, which are at all times narrow, makes it difficult for them to suck. Babies with such affliction must be fed with a spoon.

In *chronic nasal catarrh* we do not usually find the feeling of prickling in the nose, the sneezing and pain in forehead, also the fever is absent. The swelling of the mucous membrane, however, creates a permanent narrowing of the nasal passages and causes a more or less complete closure of one or both halves of the nose, by which inhalation of the air is impeded and the voice acquires a nasal tone. The secretion of the diseased mucous membrane shows a great tendency to putrify, which causes the fetid odor to the air exhaled. Chronic catarrh of the nose is an extremely obstinate disorder, often defying all treatment and continuing for years, with varying intensity.

Treatment. Keep the room for a day or two, and drink some very

hot lemonade from time to time, light diet, keep head and feet warm, not use silken or cotton handkerchiefs, but linen, change them frequently. Smear some vaseline, Bottle No. 14, on upper lip and at entrance of nostrils. At the out set of the disease, while the catarrh is hard yet, inhale hot vapors by breathing the steam from a teakettle or other vessel. In aggravated cases, take a hot foot bath with a good handful of salt in it, take one pill quinae 2 gr., Bottle No. 16 and keep the bed. You will get well in a day or two.

Infants at breast, who are yet unable to clear their nostrils, it will be necessary to free their nostrils of the obstructing secretion by syringing out the nose with luke warm water and to feed them by the bottle or spoon as long as the obstacle to sucking continues.

In the treatment of chronic catarrh, if of a scrofulous nature, the patient should take for a month or two some cold liver oil.

In bloated, flabby patient, who have a tendency to obesity, they must take for a week every evening one pill Cathartic Comp. Veg., Bottle 17, and drink cold water instead of intoxicating beverages. Local treatment should also be applied by taking some linen and pulling it into shreds, so-called charpie, and saturating it with carbolic acid 10% C. P., Bottle No. 5, then take of vaseline Bottle No. 14, and smear it well with it, tie around this small bundle a silken thread, securely, and shove the matter into one of the affected nostrils as high up as you can get it and especially to the diseased parts, leave it there for five or ten minutes and pull out by means of silk thread. If the chronic catarrh is in back part of mouth or throat make the following gargle: The same should also be used in case of sore throat. To one glassful of luke warm water, add one teaspoonful of glycerine, Bottle No. 10, one teaspoonful carbolic acid, Bottle No 5, and one-quarter teaspoonful Chlorate Potash, Bottle No. 7. Mix till all is well dissolved in each other, and use the mixture as a gargle. By using persistently the nasal charpie and gargle you will feel improved in the first few days and by following this treatment for two or three weeks, your chronic catarrh will be something, only remaining in your memory.

Polyps in the Nose. To remove these consult your surgeon.

Bleeding at the Nose is a rupture of the capillaries of the nasal mucous membrane and is usually caused by pressure, internally or externally. Most people have never suffered from any spontaneous bleeding, save bleeding at the nose, and there are but few, who have never experienced it.

Symptoms. In many instances the hæmorrhages are preceded by a sensation peculiar and somewhat like a rush of blood to the head and swelling of the nasal mucous membrane, so that, for sometime before the bleeding begins, the patients complain of stoppage of the nose or of a pressure in the forehead. The symptoms are more distressing than the bleeding.

The symptoms of actual bleeding when once set in, requires no detailed description. Blood flows from both or from one nostril, either in drops or in a continuous stream of greater or less profusion. Should the bleeding begin, while the patient lies sleeping upon his back, the blood readily flows through the posterior part of the nose into the back part of the mouth. Part of it may enter the larynx and excite a cough and the patient, upon awaking, fancies, to his great terror, that he has had bleeding from the lungs.

In other cases the blood is swallowed, enters the stomach and when afterwards vomitted, may give rise to confusion with bleeding of the stomach.

It is a well known fact that the longer nose bleeding lasts, the more obstinate it becomes; and often after a duration of three or four days it can only be subdued by means of the tampon or plug. In such cases of abundant and persistent bleeding from the nose, the visible mucous membranes, especially the lips and eyelids, where they join, assume a marked pallor; the skin acquires a dirty white, waxy hue; the patients are extremely prostrated, complain of pain in head and back of neck, of uneasiness and of palpitation of the heart and readily faint away; and, should it not be possible to arrest the bleeding, a task, which, under such circumstances, is only to be accomplished, be most energetic interferences, death from loss of blood may ensue.

Treatment. A moderate bleeding occurring in a vigorous person, particularly when preceded by symptoms, which abate when the bleeding begins, may be left to itself, as it will, generally, soon cease spontaneously. If the bleeding begins, may be left to itself, as it will, generally, soon cease spontaneously. If the bleeding be more profuse and begin to tell upon the person, or if the latter be already in a depressed condition, so that you may dread evil consequences, from even a slight loss of blood, warn the patient against aggravating the flow of blood by frequent snuffing and wiping the nose, and should apply to the nose and forehead cold compresses, or else cause him cautiously to snuff cold water, containing a little vinegar and Alum, (a pinch)

Bottle No. 1, into the nostrils. As long as the bleeding continues, the patient must avoid all violent bodily motion. Persons subject to nose bleeding must stop the use of coffee, tea, hot soups, and other blood heating substances, and should drink only cold water with a few drops of lemon juice in it.

Should this treatment be unsuccessful, if the patient in spite of it becomes weaker, should the blood begin to assume a brighter color, or coagulate slowly, do not lose too much time, but proceed at once to prepare a simple tampon or plug as follows. Take of Alum, bottle No. 1, a good pinch and dissolved it in one tablespoonful of luke warm water, and to it ten drops Carbolic acid 10% C. P., bottle No. 5, and saturate in this mixture a piece of very clean sponge, then lay over the affected nostril or both a piece of gauze and press it with the saturated sponge into the nostril or both as the case may be, using two pieces sponge in latter case, and shove this tampon as far as you can get it into the nostril, the gauze must be large enough that the corners protrude, so that you can take hold of it with your fingers. This tampon then can remain in nostril for 12 to 24 hours, and when you suspect that bleeding has stopped pull it out with a gentle jerk, by the protruding corners. This will effectually stop the bleeding. The patient, when with a tampon in his nose, should be put to bed.

In grown people when the bleeding is yet within bounds, the application of ice to the testicles in man, and to the breast in woman has shown good results, but you should never wait too long till you apply a tampon.

Sufferers with nose bleeding should drink lemonade or other cooling sour drinks, but avoid totally anything in the shape of alcohol.

LARYNX.

Catarrh. It consists of engorgement of the blood vessels of the mucous membrane, accompanied by abnormal secretion, swelling, succulence of the tissues, and copious generation of new cells.

Predisposition to catarrh of the larynx seems to exist in persons with thin skin and those having a tendency to perspire; for those who sweat readily are the more apt to be suddenly chilled by the rapid evaporation of their perspiration. Badly nourished persons are less capable of resistance to the action of hurtful agents, and are on the whole, more liable to catarrh than full blooded and robust individuals. Effeminate habits seem to aggravate it. Thus we see country people,

farmers, etc., who live continually exposed to changes of temperature and to stress of weather, are less frequently affected with catarrh, than persons of sedentary habits, and those who are but rarely subjected to such exposure.

The exciting causes are: local irritants, which act upon the larynx, such as breathing cold air, the inhalation of dust and acrid vapors, loud screaming, shouting, singing and violent coughing. If liquor or hot water should penetrate the larynx, the most intense form of laryngeal catarrh ensues.

Chilling of the skin, particularly that of the neck and feet will give rise to this disease.

Laryngeal catarrh often spreads from neighboring organs, such as from the nose, air tubes, etc. The back part of the mouth is often the point of origin. This is especially the case in that form of the malady induced by the abuse of spirituous liquors, which have a direct action upon the mucus membrane. Indeed we may often notice a hoarse, shrill voice, or other signs of acute laryngeal catarrh, coming on in consequence of a debauch, although the person affected may not have shouted or sang much. Hapitual toppers almost always have catarrh in the back part of the mouth, in which the mucous membrane of the larynx takes part.

Laryngeal catarrh is a common symptom of constitutional diseases resulting from injection or contagion. Measles, typhus, syphilitic disorders, are diseases which localize themselves upon the larynx.

Symptoms. The patient first complains of a feeling of tickling, or in more severe cases, of a sensation of burning or soreness in the throat, which is aggravated by speaking or coughing, and swallowing becomes painful. Alteration of the voice furnishes a characteristic sign of the disease; it grows deeper, hoarse, cracked and finally becomes inaudible.

Besides the symptoms mentioned there is also a violent cough. Expectoration is scant, when the catarrh is confined to the larynx.

It is not unfrequent by any means, that we see children who have been coughing a little during the day, and been hoarse without being ill, wake up and suddenly in the night with great oppression of breathing. The inspiration is troublesome and protracted, the terrified child throws itself about in bed, or springs up, clutches anxiously at the throat; the cough is hoarse and barking. These attacks are often confounded with croup, but usually vanish completely after a

few hours, or sooner. In such cases give the child some warm milk and put a sponge soaked in hot water upon their throat, plain remedies but sure to cut it short if given in time. Attacks like these are often repeated for several successive nights, while during the day the child plays about, and, with the exception of a slight cough, seems perfectly well.

As regards the course, duration and termination of laryngeal catarrh, expectoration generally appears after a few days, when then sensitiveness of the larynx, the hoarseness, and the cough abate, the disease terminating by recovery at the end of about a week.

During the day the patient is somewhat hoarse, but otherwise is well, with the exception that he is troubled by violent and protracted fits of coughing especially mornings and evenings. A fatal termination is one of the greatest rarities.

This is however one of the diseases, which must be looked after in the beginning, if not, it is very liable to become chronic, and in that state it is very tedious requiring cautious and judicious treatment. Even after a cure has been effected, there is a strong tendency to relapse.

Treatment. It is advisable, rather cautiously to habituate children to the causes of this disease than to enervate them by a systematic over-protection, which tends to increase the liability to its attacks upon every trifling occasion. Do not shut up children in the house, even though they have suffered from laryngitis, but keep them in the open air. In bad weather let them be warmly clad, but their necks should never be over-heated with thick woolen shawls washing of the the throat in cold water and cold river bathing cannot be too strongly commended.

In the cause of the catarrh be the direct action of some irritant upon the mucous membrane, the patient must be protected from it further influence. To guard the patient from further irritation of the larynx, let him be kept in a uniform temperature, regulated by the thermometer. Forbid all loud and continued talking or singing, and above all, urge the patient to resist the inclination to cough. Even though not entirely successful in this, yet much may be gained by determination on his part. The assertion that the patient cannot help coughing should never deter you from persistently telling him, *not to cough*. Cough drops are entirely useless and should be avoided. Caramels and licorice are not better and are of no use to bother the patient with.

When children are afflicted they should inhale the vapors of boiling saltwater and be given very warm milk to drink. Rub a little oil of turpentine, bottle No. 13, on their necks and put over it some flannel. While asleep at night they must be aroused every hour or two in order to rid them of the accumulation of phlegm otherwise it will have a choking tendency and aggravates the disease. Should the throat however fill up, run your finger or the handle of a teaspoon into their throat to induce vomiting,

Grown people should take one pill Quiniae when the cough does not become loose and has a tendency to remain dry and hacking, in grown persons let them take one pill Terpin Hydrate, bottle No. 22, which has a tendency to loosen the cough and bring it to an early termination, 2 gr. bottle No. 16 and keep the bed. Drink a glass of very hot lemonade, avoid draught and catching additional cold, by keeping well covered.

When chilling of the skin, feet, or throat is the cause of the catarrh, sweating must be resorted to. The best and simplest of these is elder-bloom tea, or hot lemonade, and warmth in bed. Before retiring it is well to take a foot bath of hot water and salt, and wrapping the throat in a woolen stocking, hot poultices of corn meal around throat are also of much use, care must be taken, that they do not become chilled in removing the same.

In cases where the catarrh has extended from the back part of the mouth into the larynx, gargles are very beneficial and are to be prepared as follows:

To one glass lukewarm water, add one-quarter teaspoonful chlorate of potash, bottle No. 7, 1 teaspoonful glycerine, bottle No. 10, and 10 drops carbolic acid 10% C. P., bottle No. 5. Mix thoroughly and gargle while the mixture is still lukewarm.

As to diet, all greasy substances must be avoided, but salt should be taken in liberal doses in all victuals. As to drink, milk or milk and water are the proper thing and far better than coffee or tea. It is evident that a person, taking alcoholic drink can never be thoroughly cured of this disease.

With children afflicted with this disease, it is good rule to awaken them occasionally and give them a drink of warm milk or water and milk. This will often cause expectoration and thus prevent the accumulation and drying up of the secretions in the larynx.

Croup. It is an inflammatory disorder, in which the fibrinous exudations rapidly coagulate and are thrown out upon the free surface of a mucous membrane, involving, however the outer layer only. It is especially dangerous when these exudations are deposited in the air passages.

Although peculiarly a disease of childhood, still the disposition to it is less during the period of suckling. After the second teeth have made their appearance, too, the disease is more rare, so that the greatest predisposition for croup lies between the second and seventh year of life. Boys are more subject to it than girls, but it is a great error to suppose that vigorous, full blooded, blooming children are especially liable.

Croup is most common in northerly, windy damp places, bordering on the water; often it becomes epidemic. At such times many children are attacked even in one small settlement, and often several children of the same family in quick succession, and by the most intense and pernicious form of the disease.

The exciting causes of croup are in most cases not to be explained. Cold nearly always occasions the disease. A sharp northerly or north-westerly wind stands in bad repute and is often the cause.

Symptoms. The child is cross and feverish, is hoarse and coughs with suspicious tone. In all cases examine the back part of the mouth at once, although the child may not complain of difficulty in swallowing. Should you find them swollen, and spotted here and there with small, firm white patches, you have before you the unmistakable form of insipient croup.

These forerunners may precede the attack itself by one or two days. They are absent, however, in many cases entirely, the disease setting in suddenly and unexpectedly in all its terrors. Late in the evening, generally, or in the middle of the night, the child is aroused from its sleep with a harsh, hoarse, inaudible voice, the deep, soft note of which breaks into shrill, piercing discords, already frequently coated by exudations, come for an instant into contact. The cough which was soft and sharp in the beginning, soon becomes harsh, hoarse, and is no longer barking, except when a frequent effort is made to free the air passages.

It is doubtful whether any real pain in the larynx forms a symptom of croup. The clutching of a child at its throat may depend upon a

desire to remove the impediment to its breathing, which it instinctively perceives.

Croup in a great many cases, exhibits decided remissions in the morning and through the course of day, which might almost seem intermissions. Toward morning the respiration becomes more free. The voice returns, the cough is less frequent; it is hoarse, but not without sound. The fever abates, the general condition appears almost undisturbed and only the thin piping, or still the suspicious tone of the cough remains to recall to mind the scene of terror of the the previous night. But beware of building too great hopes upon these remissions. The coming night may bring with it a repetition of the same symptoms, and the greatest danger to the life of the child. The continuance of fever, even if only moderate, and above all, the presence of those patches in the back part of the mouth, should excite the greatest solicitude.

Children who have passed their seventh year may survive attacks of croup of the utmost intensity, but during the earlier years of life croup is one of the most formidable of all diseases.

Among the symptoms, the terror, the restlessness, the full pulse, the flushed face, the hoarseness, are of far less importance than the first indications of blood poisoning, which commences when the child cannot exhale the air from the lungs. If the face grows pale, the lips colorless, the child drowsy, sensibilities benumbed; if an emetic remains without action, one is rarely justified in expecting a favorable termination of the disease.

Treatment. Prevention is always cheaper than a cure, and the first remarks under treatment for catarrh of the larynx holds good in the case of croup. Never shut up a child permanently in its chamber because it has had once an attack of croup, nor accustom it to too much clothing. Mothers, however, should not deceive themselves by bright sunshine alone, nor to send the child out without paying attention to the direction of the wind. Where there is decided predisposition to croup; watch the weather cock, and keep the child from exposure to a rude north or northwesterly wind. It is also advisable to keep the child within doors after sunset. Finally, cold washing of the throat and breast provided that the skin be afterwards carefully dried, is a capital preventative, where there is a predisposition to croup.

When the symptoms agree with those above given, it is advised to

send at once for the family physician, than the administration of such strong medicines becomes a necessity and which cannot be trusted into lay hands, even not unto those of the loving mother. It may also require the operation of tracheotomy or the insertion of the tubing into the windpipe to prevent suffocation and all these things require skill not generally found in a layman. However, while sending for the doctor, the child should be at once placed in bed and cold compresses applied to throat and chest as soon as first signs of croup appears. Do not be afraid to apply these cold compresses and change them quite often. Besides this, if the bowels be confined, administer an injection, it will ease the breathing. The best is a cold one, of three parts of water and one of pure cider vinegar.

However well the child may be, or seem to be, it must not leave its bed. The temperature of the room must be kept uniform and the air rendered moist by means of open vessels of water.

Syphilitic disease of the larynx is a very common and nasty disease, and usually breaks out in the throat when the origin of the disease has advanced to the secondary or tertiary state.

Symptoms. It commences usually with catarrh of the larynx, with ulcers therein. The unfortunates who contract the loathsome disease of syphilis and let it run till it breaks out in the larynx usually die sooner or later. Their whole system is so impregnated with this virulent poison, that hardly anything will check it.

Inasmuch as the disease is one, which ought not to occur in a well-regulated family for which this work is intended, the subject will be thus briefly dismissed, with the advice to consult your family physician and to follow his directions.

Growths in larynx can now-a-days be easily removed by the surgeon, who should be consulted with a view to an operation.

Tuberculous laryngeal consumption or tubercular ulceration of the larynx rarely arises as an independent and primary malady, is one of the most common complications of the lungs. Not only does it accompany the tuberculous form of pulmonary consumption, but is seen quite often in that form of consumption, usually regarded as a result from inflammation.

Symptoms. When hoarseness supervenes upon symptoms of tuberculosis of the lungs of long standing, you may confidently infer, also the existence of tubercles of the larynx. The hoarseness is occasioned

by the relaxation and thickening of the vocal cords, and by the secretion which lies upon them. You can thus understand why the hoarseness comes and goes, while the ulcers are growing and relax.

The sufferer declares that there is nothing the matter with his chest, ridicules the diagnosis of the physician and protests that the only evil, with which he believes himself to be afflicted, or which he fears, is the consumption of the larynx. It is rare for patients to complain of burning or smarting in the larynx, and, usually, too, they are but slightly sensitive to pressure there. The shortness of breath, the hectic flush and fever, the night sweats, the emaciation proceed equally from the co-existing tuberculosis of the lungs.

Examination of the back part of the mouth almost always shows that chronic catarrh exists there also. The sufferer hawks a great deal, deglutition is difficult. At last it is almost impossible for him to enjoy liquid food without choking himself, while solid food passes down more easily.

Death takes place, in most cases, from exhaustion or with the symptoms of consumption, which will be more fully described hereafter.

Treatment. Follow about the same directions as given under the head of catarrh of the larynx, however, the results will be but small.

Paliatives in the shape of narcotics such as morphine, must, of course be specially prescribed by the family physician.

As a matter of course, the patient, whose larynx suffers from excessive irritability from tuberculous ulcerations, must remain in uniformly heated and if possible somewhat moist atmosphere. Forbid him all loud speaking, and in bad cases, compel absolute silence of weeks duration. Attention is invited to remarks on Tuberculosis of the Lungs and the Dr. Koch remedies lately discovered, which also hold good in this disease.

Spasms or cramps of the Larynx. This disease depends upon a morbid excitement of the nerves, by means of which contractions of the muscles therein is effected. By uniform shortening of all the muscles at once, the vocal cords become tightly stretched, and the glottis is closed. These spasms occur almost exclusively during childhood, and especially in the first year of life, and most frequently during first period of teething. Among children brought up by the bottle, it seems to be more common, than among those nursed at the breast. Among adults, none but hysterical persons suffer from these spasms.

Symptoms. The course of this disease, like that of most nerve troubles, is an interrupted one, marked by fits and interval of exemptions. A sudden, violent interruption of the respiration, which may last for several minutes, is characteristic of the disease. By and by the air begins to penetrate into or out from the glottis, which at first is completely closed and still remains contracted. In addition to this the attack is accompanied by a prolonged whistling noise, the fear, restlessness, the livid countenance, the contraction of the inspiratory muscles and the position upright or bent forward. After a few minutes, as soon as the child has forgotten his fright, he is completely restored. There is no cough and hoarseness. Seldom but occasionally general convulsions may occur, in which the little sufferer may perish.

The fits thus described take place at varying intervals; a week or more may pass without their repetition. In bad cases the fits multiply, and follow one another more closely, and it is these cases that are most apt to be accompanied by general convulsions. There always remains a great tendency to relapse, which is still to be feared, even though a child has remained for months without a fit.

Treatment. Endeavor most carefully to avoid all disorders of nutrition and of digestion in children who show a tendency to this malady. Children fed by the spoon or bottle, should be placed at the breast when they show tendency to this disease.

During the fit it is impossible to give medicine, as the child is unable to swallow, as soon as the fit begins, fan the child in fresh air, and gently rub its back and administer an injection of luke warm water with four drops of Tincture of Valerian, Bottle No. 24, in the same. This will bring the child around all right, but avoid all excitement to mother as well as child.

Paralysis of the Vocal Cords causes cessation of the voice, mostly of a temporary nature, but not unfrequently of a long duration. It can be induced by contracting a severe cold.

Treatment. Application of an electric current scientifically applied, is a sure and reliable remedy.

Trachea and Bronchii commonly called windpipe and air tubes of the lungs.

Catarrh or Bronchitis. The origin of catarrh of the windpipe and air tubes is similar to catarrhs of other mucous membranes, and heretofore described.

Bronchitis consists of an inflammation of the lining membrane of the air passages. It is caused generally by taking cold, but, irregularities in the blood are also often accountable for it.

Symptoms. Acute Bronchitis generally commences, like any other common cold or catarrh, with lassitude, chilliness, slight cough, oppression and tightness of the chest, and sometimes with fever. There are cases, however, where, through the whole course of disease, fever is entirely absent. As the disease increases the symptoms do likewise. And the countenance shows great anxiety. Respiration becomes laborious, and is characteristic of a rattling or wheezing sound, as if the air going to or coming from the lungs was forced through inadequate apertures, or that they are clogged. The larynx being usually more or less affected, the voice is hoarse and speech laborious.

Respiration is easier in a recumbent position, than in an erect one. At the outset of the disease, the cough is dry and hacky, but after a little while, a ropy, transparent mass is expectorated when coughing, which somewhat relieves the pains incident thereto. Towards the termination of the inflammation, the matter expectorated loses its transparency, and becomes mixed with yellowish, or greenish matter, scanty at first, but nearly composing the whole of expectoration as the disease progresses. There is severe pain in the forehead, greatly aggravated, when coughing. Drowsiness often occurs, when the secretions of the mucus in the air passages becomes very voluminous. The tongue is white, and coated with transparent mucus. The skin dry and temperature only a little above the normal.

Acute bronchitis is never accompanied by darting pain in the side. The only painful sensation proper to it is a feeling of soreness and burning in the chest and sensibility at the junction of the abdominal and chest muscles. When other pains arise, complications always exist.

The danger of bronchitis depends almost entirely upon the age of the patient. In early life, the younger the child the smaller the air tubes, so much the more perilous is the disease. In adults it scarcely ever threatens life, excepting among old persons, where again it becomes a dangerous disorder, especially if accompanied by fever.

The gravest symptoms are those indicative of obstruction of the air passages. The most violent cough, the most intense restlessness, an immense expectoration, and all other symptoms of the acute and chronic form of this disease are of far less significance than the first

mentioned symptom. Do not forget, that life is not threatened till the air passages become clogged up with mucous, in such cases oxygen cannot get into the lungs and carbonic acid can not get out. The latter when accumulated, cause a poisoning of the system by carbonic acid.

Treatment. What was said under this head in catarrh of the larynx holds good in this case as to prevention. Be cautious as to change of temperature, cold washing, cold bathing and a general hardening of the system cannot be too much commended.

The patient should be kept in a warm atmosphere (68 to 70°) which should be moistened by steam or evaporation of water from shallow dishes placed about the room. Ventilation of the sick-chamber must not be neglected by any means.

Hot cornmeal or linseed poultices about one and one-half inch thick placed on chest and lower neck are very beneficial and prevent congestion.

As to diet during attack, give barley or oatmeal gruel very thin, beef tea, jelly and warm milk. Cold water in small quantities is harmless. During convalescence, undue exposures must be guarded against until the constitution has been strengthened and been built up again. During this stage the diet should be nourishing but very easy of digestion.

As soon as the attack appears, the patient should of course be put to bed, and be given a very hot drink of lemonade, sweetened if possible, with strained honey, within half an hour after that, give him one pill quinae, 2 gr., Bottle No. 16. His bowels must be kept open by means of injection of luke warm water.

In strong cases, where the disease seems to be abnoxious to the above treatment, give of Terpin hydrate, 2 gr. Bottle No. 22, one pill. The effect obtained from this is always an increase and a liquefaction of the secretion, considerable reduction of the irritation and an easy expectoration.

Children suffering with bronchitis should not be given any medicine, but the treatment by perspiration is highly to be recommended, especially where the bronchitis is recent, and particularly when cold is the assignable cause. By this treatment, the happiest effect upon disease of this nature is established by experience. The irritability of the mucous membranes can be diminished even in a few hours, and in fortunate cases, by profuse sweating, you may succeed in cutting short

the bronchitis. Copious potations of hot lemonade and warm bed covering seem to be the most sure means. A very sure means of producing sweat is also, to wrap the child completely in a wet sheet and put it to bed, cover the little patient with lots of warm blankets. These cold applications, from the retained heat of the body itself, are very soon converted into warm ones.

Children suffering habitual with bronchial affections should wear flannel chest protectors and when an outbreak of the disease noticed in the beginning, a plaster of mustard, oil heretofore described put on their chest, and by letting them keep the house for a few days will bring them around alright. Do not let the mustard plaster come to blisters, as soon as the skin becomes red, remove it and put a little Vaseline, Bottle No. 14, on the spot.

Rubbing the chest with turpentine, Bottle No. 18, is also a very good remedy and worthy of trial, after rubbing, cover chest with flannel.

In order to facilitate regular evacuations of the bowels in children, give a few drops tincture of Rubarb, Bottle No. 26, in sweetened water, whenever they appear costive.

Asthma, or cramps of the bronchial tubes is a nervous affection, which leads in cases of attack to severe fits, characterized by a severe difficulty in breathing. These fits alternate with intervals of exemption. Asthmatic attacks sometimes follow one another with short pauses, for a while, and then subside, often, not to return for months, or even years.

Symptoms. Should the fit come on during sleep, which it usually does, the slumberer becomes restless, and gives rise to the most frightful dreams. When the sufferer awakes, he has a great desire to draw a deep breath, but feels that the air does not penetrate into the chest beyond a certain point. Hissing, whistling, purring noises are audible, both upon inspiration and expiration, which are perceptible to a patient himself, and may often be heard even at some distance. The embarrassment increases the respiratory muscles, and even the auxillaries are brought into action, the head is thrown back, and the arms are braced so as to expand the chest—but in vain. Terror is depicted upon the countenance, the eyes are widely opened; cold sweat bedews the forehead, the complexion is pale, the impulse of the heart violent, unequal, irregular; the pulse is small and weak; the temperature of the hands and cheeks is depressed. Such an attack,

after lasting for a quarter of an hour, or longer, with brief remissions, either ceases suddenly, the air rushing forcibly into the accluded air tubes and cells, causing weak breathing, or a cessation comes about gradually, accompanied by hiccups yawning and occasional coughing, with an increased secretion from the bronchial mucous membrane.

Although, the sufferer, often as he may have safely undergone an attack, fears, that he will not live through the next, yet in the disease itself lies a remedy to allay danger as soon as it arises.

Treatment. The indications for treatment of the disease itself are, first, to arrest, shorten or mitigate the fits; and second to take measures for the prevention of their recurrence.

To attain the first object, before all else the patient must be freed from all tight clothing, and his apartment supplied with pure, dry, warm air. He must avoid feather pillows, substituting one of horse-hair. Further, towards evening he must avoid all physical and mental exertions. The evening meal must be an easy digestible one, and should be taken at least three hours before retiring. Special care must be exercised in the daily evacuation of the bowels. Around the neck, the patient should wear, loosely a light silk cloth, to protect the nerves from being chilled. Sufferers with Asthma will find great relief, to take a warm bath, just before retiring, at a degree of 95 Fahrenheitt, remaining in the water for half an hour. This has a soothing effect upon the nerves. If with all these cautions the attack comes anyway, place a piece of cloth saturate with oil of mustard, bottle No. 12, well covered with another greased piece of cloth over the outside of latter, over chest and neck, and give patient a very strong cup of black coffee made from about two ounces of roasted beans to the cup, let him drink as hot as possible. Rubbing the wrist chest and calves of leg with turpentine, bottle No. 13, as well as foot-baths of hot water and salt, all have a tendency to ameliorate the fit and should be administered if the patient so desires it, and usually they do beg incessantly, that something more be done to alleviate their suffering, their feeling is bordering on to the agony of death, which, however, rarely occurs while in a fit.

In order to avert future attacks, you should, first of all, caution the patient to avoid exposure to any irritants, which, according to his experience, have been the cause of previous fits. For instance, if the attack comes on whenever the patient sleeps in a dark or close room, he must always have a light burning, and leave his doors or even

windows open. All asthmatic persons, if they can possibly do so, should reside in a pure dry atmosphere, they should avoid dusty, smoky and windy localities, and should not sleep too long.

Among all the reputable medicines for the prevention of new asthmatic fits, as well as for a radical cure, quinine stands at the head. The shorter and more regular the intervals of the attack, so much the more is to be expected from this drug. Therefore take for one or two weeks one Pill quiniæ, 2 gr., Bottle No. 16, every morning and noon, and you will soon notice an improvement. Of course, you must be specially careful to have regularly a stool, at least once a day. If you find that your throat is especially dry, take, occasionally upon retiring, one pill Terpin Hydrat, 2 gr., Bottle No. 22.

Whooping Cough, is a catarrh of the respiratory membrane, however, distinguishable from other catarrhs of this mucous membrane, both by its origin and by fits of spasmodic cough.

Single cases of whooping cough are exceptional a proof that the specific cause of the malady, if it develop spontaneously, usually attacks many persons, and that, from a single individual the disease may spread to a great many.

Epidemics of whooping cough occur most frequently during winter and spring, but do not die out upon the approach of warm weather. They often succeed epidemics of measles or of scarletina, and sometimes accompany them.

The contagion seems to lie mainly in the secretions and exhalations of the diseased mucous membrane.

Predisposition to whooping cough is greatest in children, particularly in such as have attained their second year. It is an important fact that this predisposition is enhanced by any causes capable of producing catarrh, and still more so by the presence of any accidental irritation of the respiratory mucous membrane or from other causes. Colds, slight but neglected catarrhs, often furnish the exciting cause of an attack of whooping cough; also errors of diet.

Predisposition to whooping cough always diminishes as age advances and is extinguished almost without exception after one attack of the disease.

Symptoms. As a usual thing three stages of whooping cough are recognized: The catarrhal stage, the convulsive stage and the stage of decline.

The first, or atarrhal stage, usually begins with violent catarrhal fever, with redening of the lids of the eye and great intolerance of light. The patient sneezes incessantly and is tormented by a distressing cough. No one without knowledge of the prevalence of an epidemic, could predict the approach of a whooping cough at this stage of its development. In a few days the fever abates, the redness of the lids of the eyes and the catarrh subsides. The cough, however becomes more obstinate and persistent and at the end of each spell an astonishing quantity of tenacious ropy, transparent mucus fills the mouth. This peculiar, adhesive, copious secretion is characteristic of whooping cough in its second stage and establishes the diagnosis almost with certainty even at this stage of the disease. Soon, however, the cough assumes a peculiar character; it is accompanied by violent relaxation of the muscles of the larynx, causing spasmodic closure of the glottis. From this point is dated the beginning of the convulsive or whooping stage.

The coughing fit begins with a long drawn clear piping sound. Then follows a series of short, rapidly interrupted, expiratory coughs, and this in turn is succeeded by the crowing, long drawn inspiratory act. Thus the "whoop" alternates with the cough, the latter finally becomes inaudible until at last the ropy secretion is brought up and is removed intently by the loving mother, or else, what is more frequent still, is ejected by vomiting, together with some of the contents of the stomach. The patient grows deep red or bluish, the face becomes swollen, the eyes shed tears, and seem as if about to burst from their sockets, the tongue looks thick and blue; the little patient seems to be on the verge of suffocation. Bleeding from the nose and mouth and ears often takes place. Bleeding from the ear is caused by the rupture of the drawn skin.

The vomiting, which in bad cases empties the stomach of all its contents whenever the child coughs, is not always the only indication of the forcible compression of the abdomen. Sometimes, not often, however, you will notice involuntary evacuations of the bowels and urinating; at others, rupture or prolapse of the rectum is produced.

A sensation of tickling in the throat usually precedes each fit of coughing, the number of which, in the course of a day or night, may amount to twenty-four or upward. The children recognize these precursors of an attack with dread. They cling anxiously to their mothers, seek a support for their head or begin to cry. After the fit

they remain for a while exhausted and suffer from pain near the lower ribs. Soon, however, they recover, begin to play, or to eat with a good appetite, until a new fit interrupts their comfort.

Every coughing spell is a source of irritation to the mucous membrane of the larynx. The more violent it has been the more rapidly does new secretion form and so much the sooner is the next fit to be expected.

The convulsive stage having lasted three or four weeks, and in some cases that many months, the stage of decline gradually sets in. The catarrhal secretion loses its tenacious transparent quality, and becomes more liquid, yellow and opaque. The fits are no longer provoked by slight external irritants and the secretions become more easy of ejection; at last the fits come at longer intervals and are of a shorter duration. Vomiting also ceases, unless a coughing spell occurs again with its former violence. Relapses are very liable to occur if the child is not very carefully protected from all pernicious influences. The mucous membrane remains sensitive for months even after the little child has recovered and the disease has become extinct.

Whooping cough terminates in recovery in a very large majority of cases. According to popular belief, such an event cannot occur before the eighteenth or twentieth week, which is very dangerous to believe, inasmuch as it betrays many a mother into all sorts of heedlessness. Under careful treatment and systematic nursing, it is almost always possible to bring the disease to a favorable termination in from four to six weeks.

In some isolated cases, the malady terminates in an incomplete recovery; by leaving all sorts of herina or rupture. Some of the children remain during their life short of breath. Of course if the little sufferer is not carefully looked after, the whooping chugh, although apparently cured, can yet develop into lung troubles, such as consumption and pneumonia.

One must be aware how rarely children die in a whooping cough fit, before one can witness a fit without anxiety. Experience accordingly teaches, that the mothers, who at first are dreadfully alarmed, by and by only grow too careless, and at last without further solicitude or attention, calmly await the advent of the twentieth week, when, as they think, the disease is to subside.

Treatment. As whooping cough scarcely ever occurs, except as an epidemic, and as it is often infectious, it is necessary to avoid spreading

of the disease, where circumstances permit, an avoidance of places where the epidemic prevails, and the separation of the sick from the well, particularly from those small, weak, scrofulous children, to whom the disease would bring great danger.

The happy effect which whooping cough patients obtain by change of abode is surprising and should be resorted to.

Mild sweating is a good thing to cut the malady short. Very young children should not lie in a cradle, but should remain in bed alongside their mother or nurse, where they soon get into perspiration. The little patient should wear a woollen sock around the throat and wear flannel next to the skin upon the chest.

Throughout the warm season of the year the patient may be kept in the open air, but should return to their room before the cool of the evening sets in.

As a drink give carbonized water, either plain or with hot or cold milk.

Reduction of the number, severity and duration of the number of fits, is as important for the cure of whooping cough as is prohibition of loud talking in the treatment of obstinate hoarseness.

For this purpose parents cannot be sufficiently urged to make the child cease from coughing as soon as possible, and, if necessary, even to enforce this harsh demand with sternness, as soon as the mucus accumulation has been discharged. A portion only of the coughing is involuntary. By an exercise of firmness, a child may withstand the remaining inclination to cough. The mother must never tire of warning, admonishing, and if need be, threatening, though no immediate benefit become apparent, even after lapse of days; for this mental dietetic must never tire of warning, admonishing, and if need be, threatening, though no immediate benefit become apparent, even after lapse of days; for this mental diet must be maintained for weeks and weeks. Of course, parents who are stupid or rude, or who cannot control themselves should never undertake this treatment. Adults and children of mature years are better able to resist the inclination to cough, than youngsters, and parents should learn to discriminate.

This mental treatment is materially aided, if as soon as the child perceives a fit to be coming on, or when the tickling in the larynx gives notice of its approach, by giving about a quarter teaspoonful of bi-carbonate of soda, bottle No. 4, in a little water. This will reduce

the ropyness of the mucus, and the secretion collected about the epiglottis is thus the more easily expelled, with which the fit usually terminates.

The following mixture is a specific in whooping cough, but cannot be embodied in the chest, for the reason that it will not keep any length of time; it can be procured, however, at any respectable drug-store for a mere trifle.

R	Coccinellae,	12 grains;
	Potas. carb.,	1 scruple;
	Aquae dist.,	3 ounces;
	Syrup simple,	1 ounce.

Mix and take a teaspoonful when the attack threatens. The effect this mixture has in shortening the fits of coughing is surprising. This mixture should not be given as a matter of routine but only when there is a collection of mucus in the throat and when a fit is approaching. Parents will soon find if they administer as directed, and not otherwise, that it renders the attacks milder and shorter, and that it loosens the cough wonderfully.

It is a well known fact that whooping cough must have its run, but in the latter stage of decline the little patient should be given a very nourishing diet, especially of nicely prepared meat, eggs and strong soups.

Catarrhal pneumonia never arises unless preceded by bronchitis and solely through its extension of the morbid process from the bronchial mucous membrane into the air cells. This disease is mostly observed as a complication of measles and of whooping cough and is mostly a disease of childhood during teething period and in very old age. Occasionally it is the cause of death.

Symptoms. Is the inability of the air to penetrate the air cells of the lungs, which causes quickness in breathing and enlargement of the nostrils. The progress of this disease is sometimes, although not often a very acute one. The disease may prove fatal in a few days, especially if it attack small feeble children. In such an event the countenance, previously red, becomes pale and livid. The lips assume a bluish hue, the eyes grow dull and lustreless, and the restlessness gives place to indifference. Owing to the serious disturbance in respiration, the effect of incomplete oxygenation and over charge of the blood with carbonic acid soon manifests itself. It is very common for catarrhal pneumonia to take a chronic course. This is especially true of those cases which

let in upon whooping cough or chronic bronchitis. Here is a rule. Not only does the consolidation of the diseases form slowly and gradually, but it continues stationery with great persistency often for many weeks. The child becomes extremely emaciated, until death finally ensues with the symptoms given; or perhaps, after hope has almost ceased, complete recovery follows.

Treatment. Approximately the same general treatment as in bronchitis should be given, except as to sweating, as by it too much strength is lost. The chest and back especially between shoulder blade should be thoroughly rubbed with oil of turpentine, Bottle No. 13. In severe cases the advice of the family physician should be taken, as he can diagnose complications more readily and give remedies for its speedy counteraction.

Permanent Contraction and Expansion of the Bronchial Tubes are consequences of chronic inflammations. The inner walls of the air tubes, through it, loses much of their resisting power. Besides the pressure of the air in case of cough against the internal walls of the tubes, contribute greatly to the expansion. Contractions are of rare occurrences, they are caused by growing tissues and the contraction of same incident to the healing of sores. Under contraction, the tissues of the lungs suffer greatly owing to the obstruction to the penetration of air to all parts.

Symptoms. The bronchial expansion grows slowly and may take years, before it is disagreeably noticed. The symptoms in the beginning are not accompanied by fever or loss of strength. It invariably causes a hacking cough, especially in the morning, after awakening, when the accumulated mucus attempts to free itself. This cough and morning expectoration lasts for some time, and the body is being freed from large quantities of sweetish, ill-tasting and bad smelling masses. The air tubes being widened, the mucus can accumulate before becoming an obstruction, especially so when one and the same position in bed is adhered to. When, then, upon arising, this accumulated mass becomes shifted, coughing and expectoration ensues. If this putrid mass remains too long within the air tubes, it will disintegrate, and is absorbed into the general system causing fever. While not a necessary dangerous disease in beginning, it will, however, grow into consumption of the lungs if too long neglected.

Treatment. The expectoration of the mass must be facilitated, through disinfecting vapors, which, at the same time have a tendency

to lessen the mass and strengthening the mucous membrane. Take every morning, noon and at time of retiring, a pot of boiling water, which emits a good deal of steam in a small column, add to this twenty-five drops Oil of Turpentine, Bottle No. 13, and ten drops Carbolic Acid, 10% C. P., Bottle No. 5, and inhale the vapors. Do not force yourself to cough, but let these vapors do the loosening process.

Bleeding from the air tubes and lungs or Haemorrhages comes from the capillaries, from which, through the action of coughing, it is expectorated with mucus. Bleeding from the lungs, etc., is always accompanied by a cough, and through it, you are pretty surely guided from whence the bleeding originated. In bleeding from the nose, if occurring at night, the patient also awakens with a cough and vomiting of blood, but soon ceases while the bleeding continues.

Symptoms. The admixture of small quantities of blood in expectorations of catarrhal character, occurring in the form of minute streaks traversing the mass. It is a very common and quite harmless symptom.

The expectoration of a somewhat larger amount of blood, pure or mixed with mucus, which sometimes follows upon the inhalation of acrid vapors, or after a severe irritation of the passages, and in consequence of diseases of the heart, seldom results seriously, and rarely imperils the patient's life.

Very profuse haemorrhages, of a different nature, often arises from the inability of the capillary walls to resist the pressure of the blood, and these bleedings are usually termed "spitting blood," or "the bursting of a blood vessel." It is very seldom that these attacks are preceded by warning symptoms or by sensations of constrictions of the chest. The bleeding sets in suddenly. The patient feels as though a warm liquid were oozing from beneath his breast bone; he perceives a strange sweetish taste in his mouth, and, upon attempt to clear his throat, finds that he expectorates blood. Such a discovery generally has a depressing effect, even upon individuals of the utmost courage. The bleeding may have been trifling, still the patient will feel tremulous, pale and almost fainting. Soon after raising the first blood a sense of irritation induces inclination to cough. Course, moist, rattling and gurgling sounds are audible in the chest; a short, full, loose cough follows, and, frothy, bright red blood gushes from the mouth and often from the nose. Short pauses intervene between the coughing fits, during which more blood seems to be escaping and

collecting in the tubes, and, in this manner, large quantities of it are often ejected in a short time. The quantity of blood thus lost, varies from one ounce to a pound and often even more. The attack may subside in course of half an hour, sometimes sooner, at times not for several hours. Attacks of bleeding are rarely solitary, they frequently recur in the course of a few hours, or perhaps the next day, even, in spite of all treatment. After which, however, the patient usually obtains a respite from his bleeding, which may last for months or even years. Life is very rarely endangered from bleeding, but death often occurs from bronchial obstruction and the consequent impeded respiration.

Persons, who have suffered severe haemorrhages from the lungs, even though it may not have followed by any ill effect, and may have recovered entirely, are, nevertheless in danger of dying, sooner or later of consumption.

Treatment, The dangerous indication, above all things, demands a cautious course. In the first place, seek to calm the spirits of the patient, which are always much excited; and, inasmuch as these attacks are almost always repeated several times, it is well to save the patient from further agitation, by straightway informing him that there is more blood to come, while, at the same time, you should deny the possibility of bleeding to death.

If the person, afflicted with this malady, is not in bed at the time of attack, he should be at once undressed, especially of all tight fitting clothes, and put to bed. The room should be light and comfortable, it must also be well ventilated and the utmost quiet must be insisted upon. The position of the patient in bed should be the most comfortable, with back and head well propped. Do not overheat the chamber, but have it moderately cool; forbid all hot drinks and food. Interdict all conversation, and make the patient resist the provocation to cough. The most powerful means of combating the bleeding is the use of cold to be applied to the chest in the shape of cold compresses. In addition to this let the patient swallow small pieces of ice, or small doses of ice water. To check the bleeding, let the patient swallow one or two teaspoonfuls of finely powdered dry salt.

The diet during this disease must be a light one, consisting only of soups and other non-exciting substances. Costiveness must be combated with injections of cold water, to which a little vinegar has been added. For stool or urinating, the patient should not get up, but be

served with a pan or bottle respectively. In case of strong palpitation of the heart, apply cold compresses, but only so long, as the cold is agreeable to the patient.

Haemorrhages from the respiratory organs, being a forerunner of more serious diseases, it is always to be recommended to call in the family physician.

Pneumonia or Inflammation of the Lungs. The liability to pneumonia exists at all periods of life, down to extreme old age. It is rare, however, among infants at the breast, and in the first years of childhood. Males are attacked more frequently than female; not, however, because vigorous, full-blooded persons are peculiar subject to the disease. The latter, indeed, are by no means exempt, but feeble and broken down subjects, convalescents from grave diseases, individuals, who have already suffered from pneumonia, are perhaps more liable to be attacked than the robust; pneumonia often complicates diseases, which have already effected an impoverishment of the blood with emaciation and constitutional exhaustion. Its exciting causes are generally unknown and the opinion of great medicinal men are even divided as to the effect of cold in producing pneumonia.

Symptoms. The commencement of pneumonia, in almost all cases is announced by a convulsive chill, or rigor, which may last for half an hour or even for several hours, before giving place to a sense of heat. The cold is a mere subjective symptom and the temperature is appreciably elevated, even during the chill.

The chill is important in a diagnostic point of view. In no other affection, excepting intermittent fever, are chills of equal violence encountered. The vigor of the chill, which ushers in pneumonia is almost always the only one throughout the entire course of the disease. It is from this chill, that the duration of the disease is counted. In children convulsions often occur instead of chills.

The temperature rises to 103° or 105° Fahrenheit rarely higher, even on the first day, is accompanied by a quickened pulse, and by increase of thirst. The countenance is red, and the patient complains of pain in the back and loins, and of a distressing soreness of the limbs. There is great prostration and muscular debility. The tongue is coated, and the appetite entirely gone, occasionally there is vomiting. As these symptoms often precede the local manifestations by one or two days, they are attributed to the accumulation of fibrin in the blood.

Symptoms of functional disturbances appear in the lung either simultaneously with the chill, or immediately afterwards. The first of these is shortness of breath, a constant accompaniment of pneumonia. Assuming the normal rate of breathing of adults to be twelve, sixteen or twenty breaths per minute, you see it is augmented in pneumonia to forty and even to fifty breaths per minute. In children it even attains a still greater frequency. The length of each respiration is proportionately short, the breathing is superficial, a fresh inspiration is required during the enunciation of a short sentence. speech is interrupted.

Pain is constant a symptom in pneumonia which is absent in but very few instances. In most cases, but not in all, the patients assign the seat of the pain to the point at which the inflamed lung comes in contact with the thorax. In other cases it is felt at more remote points and even on the other side. Every deep inspiration, and especially every forcible expiration, such as accompanies coughing or sneezing, aggravates the suffering, as do also pressure upon the chest and movement of the muscles between the ribs. The character of the pain is usually described by the patient as piercing or stabbing. It rarely continues in all its violence for any length of time. It is one of the most burdensome symptoms at the commencement of the disease and afterwards diminishes or completely ceases. It is apt to be of exceedingly transitory character, or even to be altogether wanting in the pneumonia of old persons and very feeble subjects, particularly if the seat of the inflammation be the apex of the lungs or one of the upper lobes.

Cough very soon associates itself with the fever, difficulty in breathing and pain in the side. It is at first short, ringing and harsh. The patient endeavors to repress it; they dread to cough, make painful distortions of the countenance while so doing. In almost all cases a peculiar spittle, characteristic of the disease, begins to be ejected at an early period. It almost always contains blood in small quantities. The pneumonia of old people alone forms an exception to this rule. At the commencement of the attack the pneumonia spittle are so tough and adhesive that it is difficult to remove them from the mouth, and they must be usually wiped away with a cloth.

The pulse, whose frequency in pneumonia of average severity, ranges between 90 and 120 beats per minute, may, in severe cases where the temperature is very high, attain a frequency of 130 to 150

per minute. At the outset of the attack it is usually large and full, but as the malady progresses it becomes small and soft.

The headache, by which the invasion of pneumonia is accompanied usually continues throughout the attack. It is usually accompanied by sleeplessness, or the sleep is troubled by dreams, and if the patient be the slightest bit of an irritable temperament, there is apt to be a delirium.

The latter symptoms are due to the fever and subside with the latter.

The appetite is usually lost, the tongue is lightly coated with white and shows a tendency to dryness, the thirst is considerably augmented and the stools are dry and constipated.

The discharge of urine is increased and becomes turbid upon cooling. The patient loses considerable of his weight during the disease.

In calculating the duration of the disease, it will be seen that the critical period of pneumonia takes place about the sixth day. The symptoms continue with constant or increasing intensity until the critical day. While the condition of the patient, from difficulty in breathing, thirst, and the intense constitutional disorder, is beginning to awake an earnest solicitude, a striking change takes place, often within a few hours. The temperature and the frequency of the pulse often sink rapidly, the difficulty in breathing abates, and the patient feels easier and more free. In the course of twenty-four hours convalescence is often established. The patient sleeps, calls for food, and merely complains of his debility. From this time the recovery of many patients progress steadily. The blood disappears from the expectorations, sometimes gradually, sometimes with suddenness.

Death takes place during the disease if the patient is not properly cared for. It is an extreme dangerous disease to aged persons and to drunkards, owing to their intolerance of even moderate degrees of fever. The proportion of middle aged patients who succumb to the disease is but small. Complications of pneumonia with consumption, disease of the heart, Bright's disease, cause fear of unfavorable termination.

Treatment. After carefully studying the foregoing remarks, you cannot possibly be misled in recognizing this dreadful disease of pneumonia. Nearly everybody with the symptoms of this malady before them, will rush for the physician to make sure that everything is done to alleviate the suffering of the patient, and also to have that

solace, in case of fatal termination, that you have done everything in your power and means to allay the disease and to bring through it the afflicted one. This action of the relatives is entirely proper and commendable, but a word of advice will, it is hoped, be not amiss and that is in selecting your physician who is to treat the patient do select one who is notoriously opposed to the administration of much internal medicine. It is a fact that more patients suffering with pneumonia, have succumbed during the malady from the big quantity of all sorts of drugs administered to them than from the disease itself. While refraining entirely from prescribing for the patient any medicines to be taken internally, we can recommend during stage of fever the administration of quinae pills 2 gr., bottle No. 16, every two hours, which has a tendency to reduce the fever and the action of the heart. Other medicines ought not to be taken. The fact that if the disease is left to itself in a vigorous patient, if uncomplicated and of moderate intensity, it always ends in recovery, has not been generally known. Indeed it has been proved that unless warranted by special indications, and for which you had better engage a homeopathic physician, and for him to determine. Active interference has an unfavorable effect upon the course of pneumonia.

From the application of cold compresses very favorable results have been obtained and should be applied as follows: Cover the chest of the patient and the affected side in particular with cloths which have been dipped in cold water and well wrung out. The compress must be repeated every few minutes. Unpleasant as this procedure is in almost all cases, even after a few hours the patient will perceive and feel material relief. The pain, shortness of breath and often the frequency of pulse is reduced. Sometimes the temperature goes down a whole degree. Many patients under this treatment retain this surprising condition of improvement throughout the entire duration of the attack, so that their outward symptoms would hardly lead one to imagine the grave internal disorder. The relatives of the patient, too, who do not fail to perceive the improvement, readily assist in the treatment to which they usually show some opposition in the beginning.

It is only in rare and aggravated cases that these cold applications afford no relief or even increases the distress of the sufferer so much that they refuse to keep it up. In such cases it is useless to insist upon the further application of cold.

It is but natural that sufferers with pneumonia must keep their bed, but should not be buried in feathers. A good mattress with a thin quilt and sheet and light woolen blankets for covering are the proper thing. Loin, back and head must be well supported by means of pillows. The night clothes of the patient must be of the lightest kind, for every incumbrance of this character increases the labor of breathing. The room should have a very even temperature of about 64° or 65° Fahrenheit. In a warmer room the fever has a tendency to increase, and if colder, it would increase the cough. It is of the utmost importance that the temperature remains even during day and night, at the degree indicated. The air should not be too dry, and it is well to have some water in flat pans in the room. It is in fact a good thing to place near the patient a pan with boiling hot water in which a few drops of carbolic acid 10% c. p., bottle No. 5, have been poured. It will help his breathing materially. The room in which the patient lies should not be scrubbed or mopped, as it would make the air too moist and cool. Dust must also be strictly avoided in the sick room, as the making of it will materially increase the coughing. If the floor gets too dusty take some old newspapers, tear them into shreds and soak them in water, wring them out and throw upon the floor or carpet, the dust will then by gently moving those paper scraps, settle upon same and can thus be removed from the room without discomfort to the patient.

The diet should be light but nourishing, barley and oatmeal gruel, strained lemonade, orange juice, bread toasted and boiled to a mush, seasoned with sugar and a little fruit juice, roasted apples and such like. In convalescence strong beef soups, very young fowl and tender steak with eggs softly poached, toast, milk, etc., are the proper regimen. The stool, if costive must not be neglected for a longer time than twenty-four hours, and should be facilitated by injections of some warm water, with a dash of pure cider vinegar in same.

Under all circumstances it is necessary to have a nurse or other kindly disposed person in the sick room *day and night*, as the disease is very treacherous, and you are not sure at any time that delirium will not set in. It is also possible that the patient will collapse at once from inactivity of the heart. As soon as you notice this give the patient at once, with a little sweetened water, 20 drops of Hoffman's anodyne, bottle No. 25, and place a mustard plaster, heretofore described, over the heart, but not long enough to draw blisters.

For the amelioration of the headache in the beginning of the disease also to reduce fever in head, put cold compresses on forehead.

To quench his thirst the patient may take small pieces of ice in his mouth. Of course, this also must be denied him if it increases the cough.

Convalescence is rapid after the seventh or eighth day, but care must be taken against relapses.

Pulmonary consumption tuberculosis. This disease is a gradually increasing inability of the respiratory apparatus to perform its functions in the changes of gases. The deprivation of sufficient air in the body causes a slow starvation similar to the result of prolonged abstinence from food.

According to the researches of the now celebrated Doctor Koch, of Berlin, Germany, the exciting cause of consumption is the tubercle bacillus, a minute vegetable organism which he discovered in the spittle of consumptive patients. These tubercles form an aggregation of morbid matter, and form a deposit in the lungs of consumptives. They are composed of a hard, grayish or yellowish translucent or opaque matter, which gradually softens and excites suppuration in the lungs. Pus forms, which is expectorated. When the suppuration destroys the minute blood vessels bleeding from the lungs also takes place. The disease becomes very decided as the tubercle lodges in the lung and there propagates mischief, which sooner or later causes complete collapse of the whole body. Thus is tuberculosis, or consumption of the lungs, the respiratory organ is destroyed by disintegration and the poor sufferer loses the machinery in the body, so necessary for its existence in bringing to it the life giving oxygen in the air.

The tendency to consumption is, in many cases, congenital. When this congenital tendency is due to the fact that the parents were consumptive at the time of begetting the offspring, it may properly be spoken of as inherited. It is not, however, the malady which causes the inheritance, but the weakness and vulnerability of constitution which had already laid the foundation of the consumption in the parents, or which had risen in them in consequence of that disease. The hereditary constitutional feebleness of the offspring may proceed from other disease of the parent than consumption. Parents afflicted by other exhaustary maladies, or who are ruined by debauchery, or who are far advanced in years, are quite as liable as consumptive

parents to beget children, who come into the world with a predisposition to consumption.

Among the influences, by which a liability to consumption is acquired, or by which a congenital predisposition to it is aggravated, that of an insufficient diet stands first. Feeding a suckling baby with bread, pap, etc., instead of the mother's milk, may sow the seeds of the malady. When thus, a child is ill fed, it acquires a feebleness and susceptibility to disease identical with a scrofulous predisposition.

Onanism, venereal excess, depressing or exciting mental influences, immoderate study and inconsolable grief, intemperance, folly in dress, tight lacing, sedentary habits, factory air, are also predisposing causes.

In fact all debilitating diseases of the respiratory organs if not checked in proper time have a tendency to foster consumption, pre-eminently among these are: catching cold, catarrh, irritation of the mucous membrane and the presence of foreign substances in the air passages.

It is the most frequent disease extant, and about one-seventh to one-fifth of all deaths, are attributed to it.

During childhood consumption is of rare occurrence, but towards the period of puberty, and still more so between the ages of twenty and thirty, the malady attains its greatest frequency, becoming rarer as life advances, without becoming quite unknown even in extreme old age. Males and females are equally liable.

Physical signs of consumption. Inspection of the chest reveals the existence of a "habit" in many persons who suffer from consumption or who are threatened by it. This term "habit" is used to signify that a peculiar build of the body indicative of a want of proper nutrition and development, add which is found in persons, who have been subjected to debilitating influence capable of stunting the healthy growth of the system before their bodies have become fully developed. The bones of such persons are slender, their skin is thin, their cheeks have a delicate redness, the white of the eye is bluish, the tissues beneath the skin contain but little fat. The muscles are ill developed, those of the neck allow the chest to sink, causing the neck to seem too long. The intercostal muscles (between ribs) permit the ribs to spread widely apart, the entire chest is flatter, narrow and longer than in a robust and muscular person. The shoulders are also apt to sink forward and the inner edges of the shoulder blade are tipped up like wings. That cold and catarrh can invade such person very easily is

plain, and these are in a majority of cases the seed for this dreadful disease.

Symptoms. The indications in the early stages are often very obscure. The main symptoms are impaired digestion and assimilation, thirst, nausea, vomiting, more or less cough, chiefly in the morning, hoarseness or weakness of voice; irregular pain in chest, difficult breathing on slight exertion, debility, languor and palpitation, accelerated pulse, heightened temperature, night sweats and progressive emaciation.

Cough is a prominent symptom. In the early stage it is dry, short and irritative, and most troublesome in the morning, or after exertion, the expectoration is usually small in quantity and consists of ropy mucus, this cough may continue for months without aggravation, or the appearance of any other symptom. In a more advanced stage, cough recurs during the day, and especially after slight exertion, being caused by the necessity for getting rid of the inflammatory product and disintegrated lung tissue, which then begin to accumulate.

Bleeding from the lungs frequently, but not always occurs, it is a very suspicious symptom, and often gives the patient the first intimation of danger; its occurrence either before or soon after the commencement of the cough, always renders consumption probable, especially if the patient has received no injury to the chest and has no disease of the heart.

Increased frequency of respiration, in greater or less degree, occurs in all forms of consumption, and proceeds from a variety of causes. Moderate acceleration of the rate of breathing is not always accompanied by that distressing sense of shortness of breath requiring continual forced inspiration for its relief. Even patient far gone in the disease have no trouble in breathing, except when some transient increase of the destructive assimilation going on in the system demands an additional supply of air. While at rest, they are fully capable of supplying their blood with oxygen, and of eliminating the carbonic acid formed in the system, without any fatiguing exertion. On the other hand, the increased inspiratory frequency may be combined with a severe and persistent shortness of breath, which, of course, is liable to still further aggravation, and is one of the most burdensome systems of disease.

The augmented frequency of the respiration and shortness of breath

of consumptives is due to a diminution of the breathing surface of the lung or to obstruction of the air passages by the attendant catarrh and chiefly to fever. When cavities have formed in the lungs, a peculiar form of expectoration appears, which is generally described as characteristic of consumption. Rounded, grayish masses are found in the spittoon, separated from one another, by a greater or less quantity of clear bronchial mucus. If the spittle is collected in a glass, you can see irregularly rounded lumps, having a ragged outline, sinking slowly to the bottom. These lumps are almost positive indication that cavities exist in the lungs.

Fever is one of the most constant symptoms of all forms of consumption. The temperature in the patient in the morning is about normal, but towards evening often rises to about 102° F.

Emaciation and deterioration of the blood, the symptom to which consumption owes its name, properly succeed that of fever since there can be no doubt that it is to fever that they are mainly due.

Any doubts arising as to whether consumption exists, after perusing these symptoms, must be explained by a physical diagnosis, but that belongs to the family practitioner, when he determines the health of the lungs by auscultation.

There would be nothing gained to describe in this work the different stages a patient has to pass through if afflicted with consumption. Death is the most frequent result and the sole termination of tuberculosis. The fatal termination usually takes place through gradual wasting away. The emaciation of the patient finally becomes extreme. The skin seems too loose for the body, owing to disappearance of fat and wastage of muscles. The zygomatic bones project from cheek, the nose seem longer and more pointed, the orbits, from which all fat has disappeared, seem too large for the eyes, the nails become incurved, the pad of fat upon the last phalanges being gone. Frequently the temper of the patient which at first was sullen and perverse, now grows cheerful and kindly. Many have perfect confidence in their recovery up to the moment of death, and expire with plans looking far into the future. Towards the last the suffering is often severe.

Treatment. Prevention against consumption requires in the first place, that when a person shows signs of defective nutrition and a feeble constitution, especially if already he has given positive evidence of unusual delicacy, he should be placed, if possible, under influences

calculated to invigorate the constitution, and to extinguish such morbid tendency.

Delicate children, such as are born of consumptive parents, or which are otherwise decrepit, should not be suckled by their own mothers, still less ought they be brought up artificially on "pap," but should be confided to a healthy wet nurse.

After weaning the child, let its diet consist almost exclusively of milk instead of the customary soups of meal or bread and after it has done teething let it eat a little meat. This diet must be kept up during the whole period of childhood, whenever there is any skin eruption or scrofulous affection. Parents should not feed their little children with immoderate quantities of bread and potatoes.

A proper supply of fresh air is of equal importance with regulation of diet. The baneful effect of continued indoor life in producing scrofula and consumption are not sufficiently taken into account by most parents. They very often suffer delicate, sickly children to sit day after day, and for hours at a time upon the benches of a crowded school room, after which they have their tasks at home to prepare, private lessons to take, the piano to play and all such stuff. Cod liver oil cannot possibly repair the injurious effects of such mode of life. As soon as this immediate schooling begins to tell, a total cessation of it, should be the rule.

In adults, when the signs of delicacy and weakness combined with deterioration of blood appear, the use of a little tincture of iron should be tried.

Persons in whom a tendency of consumption is suspected should not inhale an atmosphere charged with smoke or dust, or which is too hot or too cold, as well as to make great efforts in running, singing, dancing or to drink hot or alcoholic beverages. Chilling of the skin is to be guarded against and the patient should wear flannel next to the skin.

Whenever there is the slightest suspicion of a predisposition to consumption, every catarrh, no matter how slight, is to be treated with the utmost care, which is not to be relaxed until the catarrh is entirely well. This rule is frequently not followed, and many people fall a victim to the deeply rooted prejudice that a neglected catarrh never leads to consumption.

Climatic changes have a tendency to prolong the life of a consumptive.

In the advanced stages of consumption it is but natural that you call in the family physician who can alleviate the suffering of the patient, even if he cannot cure.

The diet of the patient should be an extremely nourishing one and milk as it comes from the cow cannot be too highly recommended in quantities as large as the patient can take it. Fat meat, strong condense-soups, and cod liver oil is also highly commendable. Trommers extract of malt (non-alcoholic) is also a good tonic. Broth of rye meal, or cracked wheat with cream or milk. Soup of peas or beans, and chocolate are all proper dietary substances for consumptives. In case of night sweats the patient may drink a cup of cold sage tea.

Such little results are evidenced from all medicines, we refrain from prescribing any, and leave it to the attending physician, to do for the patient what he can.

In order, however, to ameliorate somewhat the suffering of the patient, a few hygiene rules will not be out of place. See that you have pure dry air in sick room, not too hot and not too cold, have spittons daily cleaned and keep disinfectants in some, also the night vessels. Change bed clothes every other day, or even daily if necessary, have the bed well shaken up and aired, so that it is perfectly sweet. Night clothes partake usually of the night sweats and should be changed daily. Be cheerful around your patient, even if you have to force yourself, and make the few remaining hours of your sufferer as bright as possible.

When the lung or part of it is gone and is not any more a part of the human organism, no physician can replace it, but as we use in our respiration only one seventh of the lung, by arresting the decay, and, through the physician's manipulation and the nurse's care, life can be indefinitely prolonged and made pleasant, even in cases, which seem hopeless.

Great strides towards finding out the nature of this arch disease and the proper remedy, have been made of late by Dr. Koch of Berlin, and it is to be hoped that he will succeed in demonstrating, and produce a remedy, by means of which, consumption of the lungs can be successfully cured. Surely the prayers of the world are with this great scientist, and it will not be long before we all may know of his success or failure. So much is evident, however, that he has found a remedy, "Lymph," which works wonders in insipient consumption, but whether it is a lasting cure, only the future will reveal.

Pleurisy is an inflammation of the membrane—the pleura—which surrounds the lungs and forms the inside lining of the chest.

It may be caused by different things, but most prominent are: injury to the ribs and pleura, the entrance into the latter of foreign bodies, such as pus, blood, incidents to wounds, etc., it arises also through propagation of inflammation from neighboring organs, as from the lungs, abrasions of the ribs and intercostal muscles. *Pleurisy*, however, is oftener caused in consequence of exposure to cold, or to the action of other atmospheric influences, of which we have no definite knowledge. In the latter case it is usually termed *rheumatic pleurisy*.

Symptoms. *Pleurisy* is not always easy to distinguish from pneumonia, the following are the chief points, however, which show the difference: *Pleurisy* scarcely ever begins with a single violent chill, while in pneumonia this is the rule. The course of *pleurisy* is never so roundabout, nor is there that sudden and complete change for the better, or crisis, which is always noticeable in pneumonia. In *pleurisy* the spittle is indicative of catarrh and some times contain streaks of blood; but there is never that peculiar, tough expectoration, stained yellow or yellowish red, by intimate admixtures of blood, which is characteristic of pneumonia.

Inflammation of the pleura is mostly on one side only and mainly on the left side. It manifests itself through heavy pain in the afflicted side and cough without expectoration. It never is without chills and fever, the latter, however, not of a high degree. As long as the pains in the side are extreme, the patient usually lies upon the other one, but as soon as they let up, the patient involuntarily reverses matters, in order to give his healthy lung all freedom in respiration.

Pleurisy is a treacherous disease and must be closely watched, and in case the patient receives good care, the death rate from this disease is not a great one.

Treatment. Sweating the patient is positively injurious and should not be resorted to under any circumstances. Give every two hours one quinia pill, 2 gr., Bottle No. 16, and apply to chest, where pain is located, cold compresses, same as prescribed in pneumonia. If this does not afford material relief within five or six hours, it shows that more energetic treatment must be resorted to. The application of large, hot poultices made of cornmeal, linseedmeal, or hops do very good service, but these poultices should not be too thick and heavy, as they would weigh down the patient too much.

When detected in its insipidity a good-sized large mustard plaster often will knock pleurisy endwise, the application of which will also do instead of the hot poultices mentioned.

Hydrothorax, Dropsy of the pleura or water on the chest, is one of the most formidable diseases, is never, however, an independent or primary affection, but is always secondary, being the result of some morbid process, which has given rise to the conditions necessary for the production of dropsy.

Symptoms. Severe shortness of breath, aggravated by the slightest of exertions, and which compels the patient to sit upright in bed, suddenly startling in terror from sleep, swelling of the joints and eyelids. Inspection further reveals a dilation of the chest in the parts where water has settled.

Treatment. Whereas this disease is usually the beginning of the end, and usually little benefit can be attained, success in cure is a rare occurrence. When the shortness of breath is intense, by the water pressing against the lungs, tapping must be resorted to, but this, of course, must be done by a surgeon. The benefit temporarily obtained under such treatment is often very marked. It has at least a tendency to prolong life and make the remaining days bearable.

DISEASES OF THE CIRCULATORY ORGANS.

Enlargement of the Heart, in size and form, consists in the expansion, of ventricles and auricles, also in enlargement of the walls or heart muscles. These enlargements are caused in disturbances of the nutriment to the heart muscles or disturbances of the circulation. Is, for instance, the blood from the right heart, insufficiently propelled through the lungs, into the left heart, then the former becomes congested, and through this engorgement the walls become dilated and the ventricle enlarged in consequence. Thickening of the walls shows that the heart tries its utmost to rid itself of this engorgement, in course of which extra labor the muscles of the heart become enlarged, in the same way as in muscular exercise of the arm or legs. Finally, however, it must come to a collapse, when the heart cannot stand the gradually increasing strain.

Symptoms. Anxiety, shortness of breath, palpitation of the heart, pain in the heart region, weak pulse, enlarged veins, skin assumes a bluish hue, dropsical swellings, decrease in urine, attacks of dizziness and swoons are all symptomatic of this disease.

This disease will develop easily in the healthy subject and can be produced and fostered by many causes, such as dancing in tight fitting dresses, extraordinary mental or bodily excitement and the use and abuse of alcoholic beverages in all forms. There is perhaps not one habitual drinker in the world, who can lay claim to a healthy heart.

Treatment. As soon as any of the above mentioned symptoms become apparent perfect rest is necessary, till a proper equilibrium in the circulation is established again. In bad cases, especially in case of emotional excitement, give 20 to 25 drops of Hoffman's Anodyne, Bottle, No. 25. Do under no circumstances, however, apply any irritants, such as mustard plaster to the heart region, as it will only increase the danger.

When complicated with general nervous excitement apply to heart region, cold compresses. Of course, it is self-saying that the use of all mental and physical labor or excitement must cease for the time being, and also all alcoholic drinks (being included) tea, coffee, spices and strong food must for a while, also, be eliminated from the dietary list.

Valvular troubles of the heart, and contraction of the arteries, are precarious diseases, and can only be ameliorated by a correct life, both as to occupation and diet.

Parents cannot be too careful in watching their boys and girls, when about reaching puberty, in their mode of life. Through excess in mental or physical excitement, in boys especially the smoking of cigarettes and other forms of tobacco, has a tendency to lay a foundation to the various diseases of the heart. Girls should not be allowed to lace too tight and not dance through the night. It will lead to numerous diseases, and especially the functions of the heart become much impaired.

Palpitation of the heart, is only too often considered a simple nervous attack, but often this gets to be chronic and a family physician should be called in for an examination of the organ, whether it is an organic heart disease or of a temporary nature, if the latter, and when born out by the following symptoms, no danger need be anticipated.

Symptoms. The nervous palpitation and nervous pain about the heart, commonly known as cramps of the heart, often happen of shorter or longer duration, while at the intermissions of pain or agitation not a semblance of disease seems to exist.

In the attack the patient displays anxiety, and images as if the heart had ceased to perform its functions. It is irregular in its beat, the arteries in forehead and neck are filled nearly to burst. The breathing is difficult, the patient sighs or gasps; pain is intense. The patient must set up, perceives dizziness, swoon, roaring in ears, flickering before the eyes. All these symptoms come quite certainly and leave off likewise without leaving any marks, excepting that the patient fears a return of the attack.

The cause of this kind of heart trouble lays mostly in disturbances in the digestive organs, trouble in the menses and errors in diet.

Treatment. Give at once a thorough injection of lukewarm water, adding to it a cupful of pure cider vinegar, if the cause is digestive trouble or error in diet. If obstructed menses is the cause, let the young girl or woman sit upon a cane bottom chair, or what is still better a seat similar to a water closet, of course her body where she sits must be bared, and put under the seat a vessel with very hot water so that the steam has free access to her private parts. At night in both cases, the patient should take one pill, comp. cathartic vegetable, bottle No. 17.

Young men or women troubled with this palpitation, must live a very regular life, abstain from all mental and physical excitement, especially dancing. They must leave off coffee, tea, chocolate and all alcoholic drinks and the boys must stop the use of tobacco in any shape.

In case of attack see that the room is well ventilated; loose clothes, and upright posture for the patient are also desirable. Allow the patient small pieces of ice or little swallows of cold water and apply cold compresses to heart.

Fatty degeneration of the heart is exclusively a disease of a glutton or drinker, and no person need to have this dangerous disease if they will eat moderately and leave all alcoholic and malt liquors alone. There is no cure for it, when once contracted, hence it is hoped that the advice here given about strong drink is heeded in time.

This disease will last for years, and nothing can ameliorate the pain and pangs of the sufferer, and terminates usually in apoplexy or rupture of the heart. Surely all the whisky in the world is not worth one broken heart, but how many are sacrificed to this poison every year, both directly and indirectly?

Pericarditis or inflammation of the *Pericardium* is usually an extension

of inflammation from the pleura, or do to rheumatism of the chest. It hardly ever attacks a person in good health or appears as a solitary or indepent diaease.

Symptoms. Pain and palpitation are the usual signs. The former effects usually the left side of the epigastrium. Excessive pain almost always signifies implication of ths pleura or lung in the inflammation. Palpitation is generally met with where the action of the heart is embarrassed, and where the organ has difficulty in fulfilling its task.

With regard to its course and termination, the forms of the disease which accompany pneumonia, pleurisy and acute articular rheumatism generally have a favorable issue; the disease is acute and ends in complete recovery. It is only fatal when complicated with other diseases.

Treatment. Same as in pleurisy, except as to quinia, which must be omitted.

Aneurism, or widening of the aorta, is a partial dilatation of this bloodvessel, caused by degeneration of its walls and is the only known disease occurring in this artery.

This disease is very rare in young people. It occurs chiefly in somewhat advanced age, especially those who are subject to chronic inflammations. Men are much more frequently attacked than women, but as the majority of aneurism are found in persons who habitually make violent muscular efforts, this difference may be accounted for by the differences in the occupation of the sexes.

Symptoms. Persons suffering from the disease often perish suddenly and unexpectedly of internal haemorrhages, before the malady has given rise to any great degree of distress. At other times the symptoms are so obscure as to render a positive diagnosis impossible. The widening may be in any part of the aorta, and it is hard to determine, for a layman, where the disease is located. The physician should be called in to administer such remedies as may be deemed best to him and his directions should be followed. When the doctor has recognized the existence of the disease you must see to it that the patient lives moderately, feeding him on a meat diet.

Congestion of the veins are of a common occurrence, and to it belongs the painful piles heretofore described. The most disagreeable form of this disease is the varicose vein of the calf of the leg, which often have a tendency to rupture. In such case the patient must be placed in bed at once and the afflicted leg be elevated by means of suspension.

While in this position wash the leg thoroughly in lukewarm water, (pint) to which two teaspoonfuls of carbolic acid 10% c. p., bottle No. 5, has been added. After this has been done take some cotton wadding and saturate it in carbolic acid 10% c. p., bottle No. 5, taking one-third of the acid and two-thirds water, and place this wadding upon the wound. Then wrap the whole lower leg in a bandage, commencing at the toes and tie the bandage below the knee. This will stop the bleeding, but the leg must be elevated for two or three days and after that the patient must remain quiet in bed for a few days more to insure complete cessation of bleeding and healing of the wounds. People afflicted with enlarged or varicose veins should habitually wear an elastic stocking on the leg where the veins are enlarged and wash this member daily with alum, bottle No. 1, dissolved in water, (one teaspoonful to a cup.)

Diseases of the Urinary and Sexual Organs.

KIDNEYS.

KIDNEYS. *Bleeding from the kidneys* is usually caused by wounds, contusions and other injuries to the organs; also from rush of blood to them, or from concretions in the basin of the kidneys.

Symptoms. The occurrence of the kidneys bleeding does not become recognizable, unless the blood is discharged with the urine.

The course of these haemorrhages necessarily depends upon the nature of the disease, which causes it, when induced by concretions, bleeding occurs regularly after every violent exertion. Bleeding is usually accompanied by chill, pain in loins, and vomiting.

Treatment. If only slight, rest is all that is necessary, when however the bleeding is persistent, place a bladder filled with ice or ice water on back in the region of the kidneys.

Bright's disease or inflammation of the kidneys is known in two forms, acute and chronic.

In the acute form, it is frequently a complication of scarlet fever, it also arises in typhoid, measles and the poison of malaria.

Symptoms. In the acute form it commences with a chill, followed by fever and sharp pain in the region of the kidneys. In addition to this, there is almost always more or less of violent vomiting and parents should watch with solicitude, the last named symptom in children with scarlet fever, and seek medical aid at once. The patient feels a constant inclination to pass water, but is unable to pass more than a few drops at each effort. The suppression of urine may be so complete, that the whole amount secreted in the course of a day may not exceed an ounce or two. Sometimes, and for a short time it

may be of the color of pure blood, more frequently it is opaque, and of a peculiar dirty reddish brown hue, and looks as if it really contained dirt. Both urine and sediment have this dirty appearance, and is a tolerably sure sign of acute Bright's disease. There is a very large quantity of albumen in the urine, which of course must be determined by a medical man. Dropsical symptoms set in, which soon become severe. The face, hands, legs and testicles swell up and the skin is so tensely swollen, that an impression made upon it by the finger is soon effaced. When the progress of the disease is favorable, the urine becomes free and more abundant, at the same time there is an abatement of the dropsy. In the most fortunate cases, the disease may terminate in from eight to fourteen days, recovery being complete and leaves no other diseases in its tracks. Is the disease, however complicated with inflammation of the lungs, pleura, pericardium, etc., the patient usually succumbs.

Treatment. Warm baths, followed by envelopment of the body in warm blankets, is the best remedy. Care must be taken however, that the bowels are kept open, by means of injections of lukewarm water. Diet nearly an exclusive one of milk and eggs. As drink give carbonated water, not too cold, such as soda or seltzer water. During convalescence, give minute doses of quinia, 1 gr., bottle No. 16, (small size of pill). It is advisable to consult a physician in very acute and complicated cases.

Chronic Bright's disease is one of the most treacherous diseases extant. The tubules which clarify the blood and take from it the urine and its constituent parts become inflamed, its cells first increase considerable in bulk, becoming fatty granules, which become loosened and pass into the urinary tubules. Through this inflammation the kidneys undergo gradual wasting away.

Bright's disease (chronic) is a very common one. Predisposition to it is far less in childhood, than in more advanced life. Men are attacked by it more than women; and debilitated persons more than the robust ones.

Its chief causes are exposure to cold and moisture, the misuse of medicines working specially upon the urinary organ. However, of all predisposing causes, is not only the abuse, but also the use of alcoholic, vinous and malt liquors. Bright's disease occurs as frequently in hard drinkers as measles in children.

Symptoms. Neither pain in the region of the kidney nor any

unusual flow of urine, calls attention to the grave disease, which is developing, yet its recognition is not difficult for the better class of physicians recognize it in the urine. Many patients are not aware of this terrible malady till dropsical signs make their appearance. As soon, however, as a person notices a failure of the strength, and a pallor and bloodless skin, he should consult a good physician with a view to have his urine examined. Does the doctor, then find albumen in the urine, it is conclusive evidence of the existence of Bright's disease. The existence of albumen in the urine becomes apparent long before the dropsical symptoms set in.

Treatment. As long as the layman is unable to diagnose this disease and needs the physician anyway, his directions as to treatment should be strictly followed.

Cancer of the kidneys is beyond healing and all you can do is to nurse the patient and make his remaining days as easy as possible.

Catarrh of the bladder arises from direct irritation of its mucous membrane, unskillful injections in gonorrhoea, stone in the bladder, etc., also from inflammation of surrounding glands.

Symptoms. Acute catarrh of the bladder is sometimes accompanied by fever, but not often. Patients complain of an undefined pain in the region of the bladder and extending to the urethra. Pressure exercised in the endeavor to urinate gives pain. The collection of a few drops of urine in the bladder occasions the most urgent desire to get rid of it. The patient hardly has the urinal out of his hand, and the few drops which he succeeded in expelling produce a feeling as though molten lead was running through the penis. As in all acute catarrh, at first the quantity of mucus formed is small, so that but few flocks are in the urine. By and by the urine becomes turbid and a regular sediment follows in the vessel. The disease may run its course and get well in a few days, and that caused from drinking new beer passes off in a day or so. If not looked after it become chronic, in which form it becomes a very dangerous disease, especially to old persons. In cases of long standing ulceration of the mucous membrane of the bladder is liable to set in, especially when the sediment in the urine grows more purulent.

When cattarrhal ulceration and inflammation sets in, the patient becomes collapsed, his countenance appears sunken, pulse weak and the skin cold. The urine is discolored, of a brownish or blackish hue, contains shreds of mucous membrane, and smells badly. It is then

liable to grow into peritonitis, from which the patient usually dies in a few days.

Treatment. In acute cases apply to abdomen hot poultices and warm baths, do not use any salt and spices and drink nothing but the purest water and milk. Soda water without sweetening or flavoring extract is a good thing.

In chronic cases a physician will have to use artificial means to relieve the patient of the accumulation of urine by means of a catheter, and at the same time he will prescribe such pallatives as may be needed.

Stones in the bladder vary in size, shape and chemical composition. The smaller ones are usually termed "gravel." Their origin is obscure

Symptoms. Sometimes, but not often, patients with stone in the bladder have a distinct perception that there is a foreign body in their bladder, which changes its place as the posture of the patient is altered. A more important and constant symptom is pain about the bladder, which is aggravated by walking, driving, or riding, and which is relieved by laying on the back. The pain darts along the penis. During urination the stream is often suddenly interrupted, owing to obstruction in the neck of the bladder by the stone. If the patient changes his attitude the ability to pass water is frequently restored. Especially towards the end of urinating the pain is acute and is combined with pain in the testicles, thighs and loins and spasmodic contraction of the anus.

Treatment. Take of bi-carbonate of soda, bottle No. 4, two teaspoonfuls and dissolve in a tumblerful of pure rain water, and take of it a tablespoonful every hour. If this remedy, which has a tendency to dissolve the stone in the bladder, fails after trying it for a week or ten days, our advice is to have an operation performed by some reliable surgeon, which now-a-days is quite void of danger.

Bed wetting. A frequent and troublesome affection of children and is a partial or complete loss of power to retain the urine. The trouble is most frequent between the ages of two and sixteen years, and this involuntary emission of urine usually occurs at night during sleep. The causes are worms in the intestines, scrofulous affections, bad digestion, too much warm fluid at supper, strong spices, gravel or stone in bladder and general debility.

Treatment. Avoid, as much as possible, the causes, and give a small pinch of bi-carbonate of soda, bottle No. 4, in a little water,

three times a day, until the bladder is stimulated. All salt, sharp and sour articles of food, malt liquors, as well as alcoholic beverages, tea, coffee, etc., must be avoided. Eat nourishing food but do not allow too much drink. Plain water, milk and cocoa are suitable beverages. Mothers should coax the child to empty its bladder before retiring, and should arouse once or twice the little one during the night, with a view to having them urinate. Children thus affected should sleep on a hard mattress with light covering. They should never lie on the back. In aggravated cases let the child take a warm bath just before retiring, but see to it that the child is well rubbed down, especially on back and abdomen. Let the children thus affected take much outdoor exercise of a gentle nature.

Corporal punishment aggravates the disease by weakening the nerves. Parents who resort to this mode of trying to effect a cure, will sooner or later find out what mischief they have done. *Beware!!*

Gonorrhoea or clap is a violent catarrh of the male urethra. It is a specific disease. Its course distinguishes it plainly from all other catarrhs which effect the urethral mucous membrane, or that of other parts. The difference is all the more decided for gonorrhoea never arises otherwise than by contagion, in spite of the denial of some sentimentalists, and the lying assertions of shame faced patients.

Little is known about the viris of gonorrhoea, only that it always will produce a clap, never a chancre of syphilitic disorder, with which the former has nothing in common. The gonorrhoeal viris is a fixed contagious matter, and its vehicle is the secretion of the diseased mucous membrane, and it is only by contact of this secretion with a mucous membrane susceptible of infection that the complaint can be transmitted from one person to another, or from the mucous membrane of one organ to that of another in the same individual. Thus a person afflicted with gonorrhoea, and handling his penis, getting some of the viris on his fingers, and then rubbing his eyes, can very easily contract gonorrhoea of the eyes by transmissiōn.

As in all other infectious disorders, between the time of infection and that of the outbreak of the disease there is a certain interval known as the period of incubation, which varies from three to eight days. Contact of a mucous membrane with gonorrhoeal viris does not always result in infection, and varies greatly in different individuals.

Symptoms. The commencement of a clap is announced by an itching sensation at the mouth of the urethra, which does not amount to

pain, accompanied by a scanty secretion of a transparent, clear mucus. At the same time the opening is slightly reddened and the lips around same are usually agglutinated by the dried secretion, a thin scale of which is also spread over the hips of the glands. An increased desire to pass water sets in; the patients often have during night, emissions of semen, and during the day suffer from frequent erections, which often induce thoughtless persons to indulge in sexual intercourse. Gradually, in the course of a day or two, the sense of itching in the urethra gives place to a burning sensation extending along the entire urethra as far as the neck of the penis. The pain increase and during the process of urinating is usually of intense severity. The inclination to pass water becomes more frequent than before, so that with each effort a few drops only are expelled and these with the utmost suffering. The secretion formerly scanty, tenacious and transparent, gradually becomes more copious, thicker and purulent, making yellow, stiff stains upon the patient's linen. The lips of the opening of the penis are red and swollen, as well as the entire penis, especially the head, and the urethra throughout its entire length is sensation to pressure. At this period the foreskin, irritated by the discharge, often becomes excoriated and swollen as if dropsy had settled between its layers. When the foreskin is in such condition it is very dangerous to try to pull it back. At this stage erections occur at greater frequency than at the outset of the disease and the stretching and expansion which the organ undergoes during the process, causes the most intense pain to the patient, deprives him of his rest at night and induces him to resort to the mildest expedients to arrest his suffering. These symptoms usually continue to increase for a week or two. After attaining their acme, the pain when urinating begins to abate, the redness and swelling gradually subside, erections are less frequent and less painful, but the discharge is more profuse than ever, which is regarded, erroneously, however, by a great many as a favorable sign, and think that the clap must run its course. After a lapse of one or two weeks more, the discharge gradually diminishes, becomes mucus and may finally cease altogether in the course of five or six weeks without any treatment whatever. Much more frequently, however, there remains a scanty stationery discharge of mucus, which may last for months; yes, even years.

During the day, if the intervals between the acts of urinating be long, this secretion glues the lips of the urethra together. When the patient awakens in the morning, a large drop of it has collected

and runs out between the adherent lips of the opening of the penis, as soon as they are separated. The stiff stains upon the shirt or bed clothes are now of a more grayish color, although generally there is a small but distinct yellow spot in their middle. A discharge of this kind is called "*Gleet*." If the patient exposes himself to further exciting cause, while this gleet lasts, the gonorrhoea frequently breaks out again; that is, the pain does not return, but the discharge once more becomes abundant and more purulent. Excess in wine, liquor, beer, strong coffee or tea, or sexual intercourse, is the most apt to cause such relapses, but exposure to cold and overexertions seem to have a similar effect. The symptoms and course of gonorrhoea present a good deal of variation as to the degree and duration of the inflammation, pain, redness and swelling of the mucous membrane.

The flexion, which the penis undergoes during erection in this disease, and commonly known as *chordee*, demands a few words of consideration. These flexions result from a loss of elasticity on the part of the inflamed portion of the fleshy part of the penis, back of the head, which prevents it from participating in the enlargement of the penis. It sometimes happens that this fleshy part undergoes permanent diminution of its size, and after that when the penis is erect it is distorted. Sometimes, too, when this diminution extends entirely through the fleshy part to a certain point, afterward, erection is only practicable from the root of the organ up to the point of enfeeblement.

Treatment. The only reliable preventive measures, which can be recommended, is the avoidance of all danger of infection. It is hoped that further suggestions for the benefit of dissolute men, who desire to continue their irregularities unpunished are not needed here.

The best results are to be obtained in a perfectly recent gonorrhoea, before the symptoms have become severe, as it then generally can be cured in a few days. Patients, usually from shame, often from neglect allow the disease to run along, until it continually increases in extent and violence, so that each day of delay makes it worse. To check and thoroughly cure this loathsome disease, purchase at any respectable drug store three powders, each of which is to contain one drachm of tanin. Take one of these powders and dissolve it in a half pint of red wine and use the solution as an injection. If the result is unsatisfactory, take the remaining two powders and dissolve them in another pint of red wine and use as before, this doubly strong

solution. In order that these injections may be of service, the patient should see that the syringe enters the opening of the penis, if you do not use this precaution, the solution may only penetrate between the head and foreskin, where, of course, it will do no good at all. It should also be observed that the syringe you purchase does not hold any more fluid, as can be propelled into the urethra, and that its point is smooth, where it enters the penis. We do not believe it to be the proper thing to place these remedies into a family medicine chest and hence refrain from it. Should any young man, however, be so unfortunate and void of honor, as to contract this disease, and be ashamed to ask his druggist for the articles necessary for a complete cure, he can write to us and we will supply him complete treatment at cost price to us. Cases of gonorrhoea of long standing, take special treatment and should be handled, according to the circumstances by a physician. During treatment the patient must live on a very light diet, abstaining from all alcoholic and malt beverages, tea, coffee, spices and fatty food.

Nocturnal and diurnal Pollutions, are emissions of semen, either during day or night, otherwise than at sexual intercourse.

These involuntary emissions are not so weakening as the public generally believes, but still, if not looked after, they become excessive and then are very debilitating. They happen to men from time of puberty till his virile power has been lost, but chiefly among young men from seventeen to twenty-five years. In most cases they are the result of former errors and of masturbation. People having these emissions are usually driven to fear or even hypochondria, by reading the numerous books nowadays published by unscrupulous physicians in the endeavor to terrify people, who have erred in youth, in order to catch their dollars.

Treatment. Lead a regular life, do not handle your sexual organs, keep your bowels open, by an occasional Pill Cath. Comp. Vegetable, Bottle No. 17, and wash every morning upon arising, your sexual organs in very cold water. It is also well to have some one sponge you along the spine with cold water.

Impotence, or weakness of the male sexual organ. During the period of manhood, complete and permanent inability of performing sexual intercourse is of the rarest occurrence. Even some deformities of the penis, loss of one testicle, or disease of both, does not necessarily cause absolute impotence. Cases of diminished power and temporary

impotence are of frequent occurrence. Unhappy marriages, barrenness, divorces, or even an occasional suicide can be prevented, if the persons, imagining himself impotent, understands that his case is not a grave one, and that about all they need is consolation and time, in which to exhibit their manhood. The persons, that are chiefly afflicted, are young husbands. who are filled with despair at the discovery that they cannot cohabit with their wives. Not only sensual women, but all, without exception, feel deeply hurt, and are repelled by the husband, whom they may previously have dearly loved, when, after entering the married state, they find that he is impotent. The more inexperienced and innocent they were at the time of marriage, the longer it often is before they find that something is lacking in their husband; but, once knowing this, they infallibly have a feeling of contempt and aversion for him. It is not the lost pleasure, or the fear of remaining childless, that makes the young husband nearly crazy and seeks the aid of the physician, but a sense of shame, and the knowledge that he is becoming contemptible and disgusting to his wife.

Under proper treatment the great majority of these cases terminate well, so that, when the desperate spouses fall into the right hands, in the course of time, they almost always become happy husbands and fathers. The most frequent cause of temporary impotence is lack of self-confidence and a consequent straining of the mind for the success of the sexual intercourse. Erections not only come without the influence of the will, but the ardent desire for them interferes with their occurrence. The more unconcerned the individual, the less attention he pays to the erections, the more certain and permanent they will be, when there is sexual excitement. Patients of this class often have powerful and continued erections at times, when they are of no use to them, but have none, when there is opportunity for coitus, or that, if erections occur, they pass off even during the coitus, before the ejaculation takes place. Even when such persons have regained their self-confidence by a successful sexual intercourse, and have retained their power for some time, they often have long relapses of their impotency from a single failure of the act. There are also cases, who have coitus with their wives at short intervals, without the least trouble, but always fail, if they make an attempt with some other woman, with whom they had no previous connection.

The most frequent cause of this diminished power is onanism; sexual excess or repeated pollutions are far more rarely the cause. The diminished power of the onanist is first increased to temporary

impotence by reading popular and medical treatises on the result of masturbation. In those writings the loss of manhood is described as the inevitable result of onanism and the despondency from reading these papers act on the same person, the first attempt at sexual intercourse almost always fails. The effect of this first failure is to induce subsequent ones for a time. Intoxicated persons never can have a successful coitus.

In *many, many* cases the only cause for the failure of the first coitus are excessive excitement and a certain embarrassment and anxiety. Such persons have often led an unusually chaste life, and, with a rare innocence after marriage, they have attempted coitus, being perfectly ignorant of the process. In the first weeks of their married life they are greatly depressed and troubled by their sad experience. If you meet them a few years subsequently, when they have healthy blooming children, and you are intimately acquainted with them, they laugh freely over the mishaps of their honeymoon.

Treatment. It must be of a psychical nature and let the patient be assured that his case is of very little importance and only temporary. As soon as a patient notices that he cannot successfully perform sexual intercourse, he should abstain from it entirely, and in this endeavor, any sensible young wife will assist her husband. During this intermission, the young husband will acquire a nonchalance and the erections will become stronger and more lasting. He should not, however, try to make use of it, till he is certain of success. After the first success, let him not overestimate his abilities, else he fails again and the old trouble is only increased. Persons suffering from impotence are particularly warned against artificial excitement, such as fingering or rubbing the genitals and thus attempt to excite erections. The effect is most injurious, and the procedure one of indecency. Washing the genitals with cold water, cold hip baths, and cold douches are of much benefit. All the medicines advertised to restore "lost manhood" and cure "seminal weakness" are useless and injurious and should not be resorted to under any circumstances. The habitual use of stimulants in the shape of liquor is injurious and often the cause of impotence.

Inflammation of the ovary. Childbirth and its sequels most frequently causes this disease, also rush of blood to the ovary, especially around the time of mensuration, if complicated with catching cold, getting the feet wet and sexual intercourse, through last mentioned period. One attack of the disease predisposes to another.

Symptoms. Secretion of mucus and bloody discharge from the uterus, pain in passing water or at stool, neuralgic pains and numbness in the vicinity. In favorable cases the symptoms pass off within a few days, without leaving any traces.

Treatment. Take frequent baths and apply frequently warm poultices of corn meal to lower abdomen. Cause copious evacuations of the bowels by injections of lukewarm water or moderate doses of castor oil, but use no violent purgatives. In regulated case instead of bathing in plain warm water, make a strong hot brine of salt and water instead.

Ovarian tumors and cysts are diseases of the ovary and very complicated. Remedies are alone in the hands of a skillful surgeon. Medicines are of no avail.

Catarrh of the womb, leucorrhoea or whites is a congestion of blood to that organ and the formation of mucus in it, same as in other catarrhs.

Causes. Congestion of the blood vessels of the uterus during menstruation. Heart and lung diseases, direct irritation of the womb, which is often caused by too energetic coitus, by masturbation, and by wearing, on the part of ladies, of apparatuses having a tendency to interfere with the course of nature.

Symptoms. The disease usually begins with symptoms of severe congestion of the pelvic organs, with pain in the lower regions, with a feeling of fulness and weigh in the pelvis; pressure on the lower part of the abdomen gives the patient pain. When the disease is mild these symptoms usually appear without fever, but when severe, which is usually the case in irritable persons, the symptoms are accompanied by slight fever. After three or four days the patient will notice a discharge from the genitals, at first transparent and sticky; it leaves grey spots on the underclothes; afterwards it becomes cloudy, more or less purulent, and leaves yellow spots on the clothes. In most cases the pain and any accompanying fever disappears in from eight to fourteen days. The discharge also becomes less about this time, or a little later it looses its purulent nature and finally disappears entirely. This is the usual termination of the disease if taken care of in time, but if allowed to run, the acute stage is followed by chronic catarrh of the womb. The latter is a tedious and very painful disease. It may drag on for years and often defies all treatment. Women suffering with chronic catarrh of the womb can conceive, but the result is usually a premature birth, a miscarriage.

Treatment. Inject into the sexual organ a solution of one quarter teaspoonful of alum, bottle No. 1, dissolved in one-half pint of luke warm water, for five days. Purchase of any respectable druggist two bottles of Hunjadi Mineral water and take it, on an empty stomach, every morning one wineglassful; after the evacuation of the bowels which will follow, take one quinia pill, 2 gr., bottle No. 16. Strong nourishing diet, cold compresses to abdomen, regular habit, abstaining from sexual intercourse, liquors, wine, and especially tea, are necessary for a thorough cure.

Inflammation of the womb. This disease may occur in any adult female and is sometimes a serious complication of pregnancy or of childbirth. The disease may be acute and chronic. The neck of the womb is generally the part involved, and the ultimate tendency of inflammation of the deeper tissues of the womb is towards ulceration.

The prevailing causes are exposure to cold, sitting or standing on damp ground, suppression of the menses, excessive sexual intercourse and mechanical irritation.

Symptoms. The disease usually commences with a chill, followed by a slight fever, full, jerking pulse, thirst, nausea and vomiting, and sometimes diarrhoea with straining. The bladder is irritable with frequent desire to urinate. There is also a feeling of throbbing in the womb, which is swollen and painful. The patient usually prefers a recumbent position, as sitting up aggravates the pain. The disease nearly always begins during menstruation, and then the bleeding ceases suddenly. In favorable cases the malady runs its course in from eight to fourteen days; the symptoms subside gradually and the disease ends in perfect recovery. The disease must be treated in the beginning, if not it will become chronic and is then very hard to cure.

Treatment. In inflammation of the womb the bowels are usually constipated and this must first be remedied by giving injections of luke warm water, to which a little common salt has been added. Then apply to bowels (lower part) hot poultices made either of linseed or corn meal; make them about one and one half inches thick, so that they keep the heat well, and change as soon as cooled. If the inflammation is accompanied by offensive discharges from the vagina, cleanse the same by means of injections of warm water. In aggravated cases it is recommended to use the Hunjadi James Hungarian Mineral water for two or three weeks, every morning, a wineglassful before breakfast.

Contractions and closures of the womb. In young persons who develop late, moderate degrees of contraction of the neck of the womb are quite frequent. They hinder conception, without rendering it impossible. They impede the escape of menstrual blood and cause it to collect temporarily in the uterus and are expelled by painful contractions, commonly called colic of the womb. The disease usually disappears after marriage and first childbirth. However, should there be much trouble, it is recommended to consult a surgeon, with a view to have an astringent injected into the womb, which will give relief.

Curvatures in the womb, flexions, deviations in position, such as anteversion, retroversion, falling or descent and prolapse of the womb.

This class of diseases are affections of the womb, which are very movable and in consequence thereof, have become dislocated, in directions as the names indicate.

Anteversion is the displacement of the womb in such manner that its whole axis is directed further forward than usual and most frequently occurs in women with strongly curved pelvis.

Retroversion is a state when the womb is displaced towards the back.

Falling and prolapse of the womb depends chiefly on relaxation of the part that maintains the womb in position, particularly its ligaments and the vagina. If during this relaxation of the ligaments a strong pressure from above downwards act on the womb, the latter is pressed down, inverts the vagina and passes deeper into it, and the result is falling of the womb. If part of the womb protrudes the lips of the vagina, it is a prolapse. Relaxation of all the parts that should maintain the womb in position occurs most frequently during childbed, and it is the abdominal pressure that most frequently presses the womb downward. Women who cannot take care of themselves during confinement, but are obliged to do hard work, which causes abdominal pressure, a few days after delivery, such as washing and sewing in a bent position, are peculiarly liable to these latter troubles. Falling of the womb seldom occurs in women who have had children. If it takes place suddenly, as occasionally happens from lifting heavy articles, or from severe coughing the stretching of the ligaments causes severe pain in the abdomen, and great general disturbances, fainting, nausea, etc., etc. If the descent develops slowly; there is usually but little annoyance at first, consisting chiefly in an undecided feeling of pressure downward and in stretching pain in the lower part of the abdomen and small of the back. There is also pain and inconvenience

in urinating and in stool. The trouble is also usually accompanied by constipation, colic, pressure and tension.

Treatment. As all dislocations of the womb are somewhat different, depending on certain circumstances, no general rule for the amelioration and cure can be given here, but we cannot recommend too strongly to consult the best surgeon in your neighborhood, who will see at a glance what suspensory or supporter is necessary. His directions as to care and mode of life should be strictly followed, in order to expect a permanent cure.

Tumors of the womb also belong to the realm of surgery, and for their radical cure, a surgical operation is necessary. Of late years nearly all these operations are successful and void of danger, if in skilled hands.

Menstruation. Irregularities in the menses or periods, as also the functions of menstruations are called, are not independent diseases, but are symptoms of affections of the female sexual organs or of other diseases impairing the general health.

In the female the periodical excitement of the generative apparatus is known by a group of phenomena, known under the different names of menstruation, menses, periods or courses, and is one of the most important functions of the female organization and constitutes a real monthly crisis.

During childhood the sexual system of the female is inactive, but at the ages of from thirteen to about sixteen years, a change becomes visible. The outlines of the body grow more rounded, the breasts increase in size, and the entire aspect undergoes a peculiar alteration, dependent on the approach of maturity. At the same time a discharge of blood takes place from the generative parts, accompanied by some general disturbancess of the system. When these changes of life have taken place, the young girl is known to have arrived at the period of puberty.

Afterwards the discharges recur at intervals of four weeks, and from their correspondence in time with successive lunar months, they are designated also as her "monthlies." These periods are usually regular in recurrence from their first appearance until about the age of forty-five to forty-seven years. During this time woman is capable of bearing children, and sexual intercourse is liable to be followed by pregnancy. After the last mentioned ages, these periods first become

irregular and then cease, their final disappearance being indicative that pregnancy cannot again take place.

Between the ages of sixteen and forty-five or six the regularity of the menses indicates to a great extent the aptitude for impregnation. All causes of ill health, which derange the menses are very apt to interfere with pregnancy, and women, who are regular in their menses, are more likely to become pregnant, after sexual intercourse, than those in whom the periods are absent or irregular.

When pregnancy takes place, however, the menses are suspended during its continuance. They also usually remain absent, after delivery until the time the baby is weaned, when they recommence, and recur at regular intervals as before.

When the menstrual period is about to come on, ladies are usually affected with some degree of discomfort and lassitude, a sense of weight in the pelvis, and a more or less disinclination to society. Of course these symptoms vary, some very pronounced, and others less so. It begins with a discharge of vaginal mucus, which soon becomes yellow or rusty brown in color, from the admixture of blood, by the second or third day it has the appearance of pure blood. The unpleasant sensations, at first decided, then usually subside and the discharge, after continuing for a few days longer, then grows more scanty. Its red color diminishes in intensity, becoming brownish or rusty, until it finally disappears, and the process comes to an end.

As puberty advances, no mother should neglect to teach her daughter, to expect the change, which is about to take place so that first appearance of the menstrual flow, may neither be arrested by the alarm naturally felt at something heretofore inexperienced or unknown, nor by the dangerous applications, to which, through ignorance, the young girl might resort to. Some young girls look at their development with disgust to such extent, that they are not even careful of the great changes taking place within themselves. Contract cold, take cold bath with a view to clean themselves, or endeavor to check nature in its course. These indiscretions will bring on disordered menstruation and, too often permanent ill health. The time of puberty is also an opportune one for mother or guardians to inform their daughters or wards of the destiny of women, as laid down by the creator, that she or they are the medium of reproduction of the species, and that in the near future, when properly united in wedlock, they are liable to become the sublimest of all creation—a mother. If

mothers will lay these cold facts before their daughters at this time, they will save themselves as well as their offspring oftentimes disgrace, which can easier happen to the innocent, than the young girl, who knows from her own dear mother's mouth that it is immoral and wrong within the eyes of God and mankind, to allow herself to be used as the medium of reproduction, or for the satisfaction of the illicit desire of a conscienceless man, without the bonds of matrimony to a man, who equally returns her love, and between whom that congeniality exists, which contributes so much to the unbounded happiness of a well matched pair.

As to the irregularities of the menses, different symptoms make their appearance, but all show disturbances in the organism, which must be pacified. Among the earliest of these are:

Premature menstruation, must not always be credited to an early developement and the natural consequences, but occurs quite often through a fall, violent jumping or severe mental emotion for the first time. In such cases there may be a considerable flow, and lasting for several days. Mothers should be aware of these facts, so that in extreme cases they may maintain their own composure, and through it inspire it in their daughters.

Treatment. Pacify your child by kind words, and give her 5 to 10 drops of Hoffman's Anodyne, Bottle No. 25, in a little sweetened water. Place your little patient in bed, in a lying position, light covering, keep room cool and well ventilated, give when girl is thirsty, lemonade as cool as possible, but not iced, and the flow will soon become normal.

Tardiness in first menstruation. When all the external signs of womanhood have appeared and menstruation does not occur, but there are aching, fulness and heaviness of the head, bleeding from the nose, palpitation of the heart, shortness of breath, one slight exertion, weariness of the limbs, pains in the small of the back, in lower parts of the bowels and down the inside of the thighs, it may be regarded as indicative that nature is endeavoring to establish the important functions of menstruation, but is somewhat hindered in its course. It is of the utmost importance to establish the cause of these obstructions. Delay of the menses, giving rise to the symptoms just noted, very rarely occurs in the healthy and vigorous girl, but follows as a consequence of original delicacy of constitution or of some long standing affection. An old saying holds good, and should be remembered:

“A girl is not sick, because she does not menstruate, but she does not menstruate because she is sick.” Tardy menstruation is especially significant in those girls, who are predisposed to any form of consumption. In these persons it implies a frail body, in which the menses may not appear at all, or in which the flow of blood is very liable to seek egress through the lungs. Any young girl from 14 to 18 years of age, who has not menstruated, and has a cough of difficulty in breathing, sore throat, hoarseness, or pain in her side, it is symptomatic of very bad health and measures for her relief should be at once established.

Treatment. Internal medicines should not be taken and all the articles known to force the menses are more harmful than good. When tardiness of the menses is established for good cause as above described, put your patient on a very nourishing diet, both meat and vegetable, avoid all heavily spiced dishes and tea and coffee. Good plain nourishing food, and as much milk as is desired by the patient. Induce her to take lots of outdoor exercise in the morning, such as riding, walking, running and even the skipping of the rope is one of the best things. Never allow her to overtire herself. About evenings, half an hour before bed time, immerse her hip in a tub of hot water so that her feet and trunk are out of it, covering them by means of blankets. The bath should be taken for at least ten minutes, then she should be thoroughly rubbed dry and put to bed, in a well ventilated room.

Under no circumstances administer any kind of medicine to a young girl thus afflicted, except by special directions of your family physician.

Under certain conditions of long delayed menses marriage is an admirable remedy and has established these functions with a surprising regularity, but mothers or guardians cannot be too careful to adopt this course and should never do it, before they have obtained a professional opinion from some good physician, who has formed it after a careful consideration and diagnosis. The physician alone can establish the cause of the tardiness of menstruation, and if this be the general health or imperfectly developed sexual organs, your daughter will not be alone disappointed in the expected remedy, but her husband also is made part in it, and the two suffer.

Suppression of the Menses. When menstruation has once been established, it is liable to be suppressed by different causes.

The most frequent of all the causes, and to which no danger, whatever is attached is the happy event of pregnancy. In the young wife

it is surely a time for rejoicing, for it is one of the first signs of approaching motherhood.

Occasionally it is the consequence of weakness, from sedentary in-door occupations, combined with want of fresh air and sufficient rest, chronic and acute diseases; sexual excesses and mechanical obstructions, or it may quite suddenly occur during the flow, from exposure to cold or dampness, such as getting the feet wet, sitting on damp ground, eating or drinking very cold substances, violent emotions, such as anger, terror and fight.

Too much indulgence in sexual intercourse will often stop the menses for two or three periods without pregnancy.

Women are very liable to contract this very troublesome disease if they persist in making a deformity of themselves by tight lacing and wearing apparel. The injury this peniculous fashion brings forth, beggars description. It interferes with the circulation to such extent, that diseases are formed beyond the healer's art. To say, however, too much on this subject would be injudicious, as the women who persist in making a deformity of themselves will not acknowledge the wrong they do to themselves, to their prospective offspring and to their husband's.

Treatment. In ordinary case, without complication, take a hot foot bath, to which a handful or two of common salt has been added and make a tea of tansy, drinking of it freely. Plain nourishing diet, avoid stimulants including tea or coffee.

Painful Menstruation is usually caused by a congested condition of the secretory vessels of the womb, diseases of the ovaries, constipation and a contracted opening of the womb. In obstinate constipation, the rectum becomes often packed with excrementory matter and distended through it. Though it presses on the neck of the womb and renders the escape of menstrual fluid difficult and extremely painful. Ovarian irritation often induced by self-abuse causes pain during menstruation. Ladies of neuralgia, hysteric or rheumatic tendency, generally suffer likewise.

Symptoms. Severe bearing down pain in the neighborhood of the womb, somewhat similar to the pain of labor in childbirth, and occurring in fits; aching in the small of back, loins, pelvis, and even extending to the limbs; headache, flushed cheeks, hurried breathing, palpitation, and general nervous debility. These symptoms

sometimes precede the flow several hours and even days, and keep up till the discharge is thoroughly established.

Treatment. If from constipation, which is usually the cause, take one day before the arrival of the period, at bed time, one pill Cathartic Comp. Vegetable, and if constipation during the time of the menses, still exists, take frequent injections of luke warm water, to which a little vinegar has been added. Ladies thus afflicted should take lots of outdoor exercise and eat food, which they know is easily digested by them.

During intervals between menstruation, cold or warm baths are of much benefit, dry rubbing and the warming of flannel over lower abdomen are necessary. Sexual intercourse must cease at least three days before the appearance of the menstrual period, and the patient must rest in a reclining position.

In aggravated cases, the wearing of cat's fur hair next to body over abdomen and small of back gives permanent relief.

Profuse Menstruation is produced by too great a determination of the blood to the womb, and superinduced by too much exercise, strains, injuries, violent passions of the mind, check of perspiration, abortion, difficult or tedious, labor and general debility. In rare cases it is also caused by too energetic sexual intercourse.

The symptoms are those of approaching menstruation, with perhaps a little stronger headache, giddiness, shortness of breath and severe pains in back and loins, thirst, slight fever and a strong hard-beating pulse.

Treatment. Prevent bodily exertion and mental excitement and keep patient in a horizontal position during menstruation. All stimulating food or drink must be avoided during the period. As a drink cold lemonade is to be recommended. In aggravated cases when bleeding is profuse, the family physician should be called in and the case left to his care.

Change of life or *cessation of the menses* is a disagreeable period every woman will have to pass and she can expect it whenever she is beyond the fortieth year of life; seldom earlier. This period varies greatly; some get over it easy, others it takes a longer time; yes, often it is lengthened to 4 or 5 years. It is no disease and the course of nature should not be interfered with. Very often during this period

complications arise, which are symptomatic of disease, but these cannot be generalized and must be left to the physician.

Catarrh of the vagina, gonorrhoea, is the same disease as gonorrhoea in the male. This disease is not induced by sexual excess, but only through infection of gonorrhoeal matter, or unclean cohabitation with the opposite sex when thus afflicted.

Symptoms. The first symptoms of gonorrhoea in the female, is a feeling of itching and warmth in the sexual organs, and a scanty mucous discharge, are not very characteristic and often remain unnoticed. After a few days from the commencement of the disease, there are severe burning pain in the genitals, swelling of the lips of the vagina, and a desire to urinate. These troubles rarely become so severe as to interfere greatly with walking, sitting and moving the body. The secretion which in this stage is yellowish green, thick and purulent often oozes up in large quantities between the lips, even to the anus. After the disease has lasted a fortnight or three weeks the pain abates and ceases, the discharge looses its purulent appearance, but continues a long time till the secretion dries up and looses its power of inoculation.

Treatment. The same local treatments is prescribed for gonorrhoea in men. In addition scanty diet, free stool, long continued baths, where the hip is only immersed tend to lessen the pain. If there are no symptoms of inflammation, make injections into the vagina of luke warm water in which a half teaspoonful of alum, bottle No. 1, has been dissolved. In very obstinate cases introduce into the vagina wads of charpie, sprinkled with alum, bottle No. 1.

Skin Diseases.

SKIN.

INFLAMMATION of the skin is usually caused by heat, the direct rays of the sun, mechanical and chemical irritation and is manifested by a rush of blood to the skin. If this is then allowed to act with greater intensity, it gives rise to red patches or inflammation.

Symptoms. Inflammation, arising from local irritation, is characterized by red, slightly prominent patches, the color of which gradually becomes fainter at the edges. They become pale, when pressed upon, and assume a yellowish tinge, and when the pressure is removed become red again. The spots are the seat of more or less pain.

If caused through solar rays, blisters are formed upon the burns.

When it arises from the friction of two opposing surfaces it is called intertrigo, or chafing of the skin. This is very common among infants, especially among feeble ones, appearing in the folds of the skin, upon the genitals, behind the ears, and in the neck. It also appears underneath of hanging breasts of very corpulent females. When it arises between the nates or buttocks, from the continuous friction upon one another during long walks, the seat is usually between the crotch and is then called "the wolf." Continuous confinement and sameness of position in bed will also cause it. Discharges from nose and eyes also causes abraisions of skin.

Treatment. If resulting from local irritation, it will soon subside when the exciting cause is removed. When the burning pain is severe apply cold water. Intertrigo as in babies, dust corn starch or magnesia, bottle No. 11, on afflicted parts, afterwards wash with castile soap and apply Vaseline, bottle No. 14. Chaffed mouth and face. Wash thoroughly and apply glycerine, bottle No. 10. "Wolf," wash with

castile soap and apply vaseline, bottle No. 14; next morning wash again and apply magnesia, bottle No. 11, or corn starch.

Erysipelas is distinguished by an intense hyperaemia of the skin and by a profuse serous transudation, not only into the skin itself but also into the underlying tissue. It is liable to form abscesses and implicate the glands in the inflammation. It is also liable to result in rupture of the small blood vessels and consequent bleeding into the skin and upon its free surface. Violent mental emotions seem to have an influence in producing the disease, especially in persons who have suffered from it before. It occurs generally in middle age and is more common in women than in men. It occurs oftener in warm than in cold weather.

Symptoms. They are preceded for some days by a general disturbance of health, accompanied more or less by fever. The first local symptoms of the disease, while developing is a sense of heat, pain in skin, which is not yet red or swollen. Soon the skin begins to redden and to swell. At first the redness is speckled and clear, but soon becomes diffuse and dark. The swelling increases and soon becomes extreme, especially where the skin is attached to the parts beneath by loose connective tissue (as in the eye lids) where it renders the skin smooth and shining from the tension. With the swelling the sense of fullness and burning increases. At this period there is almost always a violent fever, which grows worse towards evening. The pulse is usually full, beating from one hundred to one hundred and twenty times per minute, and the temperature rises to 105° F. The thirst is increased and appetite lost. In erysipelas of the face, the mucous membranes of the mouth and tongue sympathize with the inflammation of the skin. There is usually signs of violent catarrh of the ear. The tongue is heavily coated and dry from effects of fever; the taste in mouth is slimy and bitter.

Erysipelas of the face almost always involves the eyes, ears, hairy scalp, and a portion of the throat, but scarcely ever attacks the back of the neck or trunk. Its whole duration is from a week to ten days, seldom longer. The process terminates in the peeling off of the cuticle in large pieces, even where there were no blisters. If the scalp has been inflamed, the hair always falls out soon afterwards. It does not cause, however, any permanent injury to the hair follicles, hence the baldness which it occasions soon disappears completely.

Wandering erysipelas generally attacks the extremities and spreads

towards the trunk and head. It usually advances steadily, so that the disease, while subsiding in one place, is commencing in the immediately adjoining one. This form is not so severe as the stationery erysipelas.

Treatment. This disease, if allowed to have its run, nearly always terminates favorably without much medical treatment. At most, envelop the inflamed parts in cotton and when the skin is very tense and painful apply cold compresses. The fever must be combatted with quinine and give of it at eight, ten and twelve o'clock mornings one two grain pill, bottle No 16. A great many people are in favor with so-called "sympathetic treatment" and "remedies" and it is a known fact that even educated people take stock in conjuration. The remedy is quite harmless and if the patient receives comfort from it this humbug can be applied without danger.

Herpes or ringworm is an eruption of the skin and is confined exclusively to the most superficial layers thereof. Fever sores around mouth; those face eruptions appearing towards the end of febrile disease, belongs to this class.

Symptoms. According to the location of the body when the disease makes appearance it is grouped. Thus lip herpes or sore lips is situated there and often extends over the mucous membrane of the mouth. Face herpes, when it attacks the outer part of the genitals it is called pudendalis. Herpes zoster or shingles extend along the skin nerves in a very peculiar manner. All forms of Herpes begin with a sense of burning pain, usually not of a very severe character, in the afflicted regions. Numerous red points soon become visible, which coalesce, forming red specks of irregular shape which on the next day usually are covered with a small transparent vesicle. The contents of these vesicles, which rarely exceed the size of a split pea, become turbid in two or three days or reddened from an admixture of blood. About the fourth or fifth day the vesicles commence to shrivel, and they and their contents subsequently dry up into a brownish scab. The scabs fall off in 10 or 14 days after first appearance and for some time there remains a reddish spot, covered with very thin skin.

Treatment. Always runs a favorable course. Bathe freely in luke warm water and apply vaseline, bottle No. 14, to afflicted spots; in severe cases add a little carbolic acid, bottle No. 5, to vaseline.

Nettle rash is an eruptive disease of the skin and is caused by the following:

Local irritation of the skin from contact with stinging nettles.

In some persons when they eat strawberries, crabs, clams, mushrooms or other unaccustomed food. It also accompanies fever.

Symptoms. Usually when in bed, and after getting warm, the patient feels an intolerable itching on the neck, anus or body, and on scratching soon discovers large welts, which burn, tingle or smart and are the source of great discomfort. It is sometimes accompanied by fever, which, with the itching, torments the patient to such extent as to cause delirium.

Treatment. Sponge the skin where afflicted and surrounding parts with ice water in which a small quantity of cream of tartar, bottle No. 6, has been dissolved (about half teaspoonful to a glass of water.) Apply very cold.

Eczema or Salt rheum. A troublesome, inveterate eruption, appearing on different parts of the body.

Symptoms. Consist of itching, accompanied by irresistible scratching. Very small eruptions or vesicles appear which break and discharge a thin, corrosive fluid, that causes a great degree of irritation or itching; afterwards scabs often form upon the part affected, which after being removed will reappear. The skin is always more or less swollen and inflamed, and then the degree of itching is so intense that the patient is compelled to scratch continually in order to obtain relief. The condition of the blood has a great deal to do with the disease.

Treatment. Take a warm bath every day and soap your whole body thoroughly, remain in bath about 15 minutes. Rub dry and apply to afflicted parts vaseline, Bottle No. 14, to which a few drops of carbolic acid 10% C. P., Bottle No. 5, has been added. The bath and ointment must be kept up for a considerable length of time. Then take 3 teaspoonfuls of cream of tartar, Bottle No. 6, and 3 teaspoonfuls of sulphur, Bottle No. 15 and add to it one cup full of pure sugar drips, of this mixture take one teaspoonful before breakfast. Relief will soon come. After cure, the daily habit of bathing, using lots of soap, should be kept up. Nourishing diet, no spices, coffee, liquor. Outdoor exercise is beneficial.

Psoriasis, abnormal growth of skin.

Symptoms. This disease always commences with small round spots upon the skin. These are reddened, project slightly above the surrounding level, and immediately after their appearance are smooth,

looking as if the covering of the skin had been raised by a serious effusion, and had sunk back again after the liquid had been reabsorbed. This small, round, red, infiltrated spot soon becomes covered with dry white scales. The favorite seat of this disease is upon the knees and elbows, but from there often ranges over half the body.

Treatment. Bathe for a half hour in very warm water, soap afflicted parts well and rub with brush till scales all disappear. Apply thick coats of vaseline, Bottle No. 14, adding a few drops carbolic acid 10% C. P., Bottle No 5, and cover the spots with flannel. Put patient to bed in a very warm room. Repeat for about four or five days. If constipated, give injections of luke warm water. Meagre diet. As a drink, give lemonade.

Sycosis or Barbers Itch. It is an inflammation of the sebaceous glands and of the deeply rooted hair follicles, also take part in this inflammation, and become the seat of swelling infiltration and suppuration. The disease never occurs in women or children, who never shave; but only affects adult males, particularly at a time, when the beard has acquired a pretty thick growth. Dull razors, awkward shaving, the effect of irritating soap, or dirt cause the disease.

Symptoms. The disease commences with a sense of heat and tension, accompanied by the development of red infiltrated nodules, of the size of a small pea, between the hairs of the beard upon lips, chin, cheeks. After a while little elevations, containing pus, which are always perforated by a hair, appear upon the lips of the nodules. The little elevations or pustules burst in a day or two and pour out their contents, which immediately dry in a brownish crust. The nodulents still continue beneath the crusts, and even, after the latter have fallen, they diminish very slowly or not at all. The disease spreads very rapidly, however, it is sometimes confined to a small spot, and at other times, the whole face, where hair grows, is covered with dusky red nodules, pustules and scabs. The disease is of indefinite duration, and often lasts for years without subsiding, if not checked in proper time. In old cases, when it does heal, the hair follicles having been destroyed, the hair does not grow upon the affected spot, and then presents the appearance of a scar.

Treatment. All the scabs must be softened and be removed by rubbing them with oil, or by the application of a rag saturated with oil, best for this is olive oil. Then shave or get shaved every day, notwithstanding your own or your barber's protest, it does not hurt so

much as you imagine. The pustules, which afterwards appear, must then be pricked open, by means of a thin knife or needle. It does not hurt. Then wash your face, where afflicted with very strong vinegar, which smarts a little in the beginning. During night cover affected part with a rag saturated with an ointment made of equal parts of sulphur, Bottle No. 15, glycerine, Bottle No. 10, and alcohol, (five cents worth from any drug store will suffice.) This is a radical and specific cure and leaves your skin afterwards in a nice healthy condition. After complete cure, the wearing of full whiskers is recommended.

Itch or scabies. The itch is an inflammation of the skin, characterized by the formation of nodules, vesicles, and pustules and is caused by the presence of an annual parasite—the itch mite—, it is recognizable to the naked eye as a round white body and when viewed under the magnifying glass resembles a tortoise in shape. The young insect has six, but the adult is supplied with eight feet, the anterior pair of which are supplied with suckers. These little mites burrow little passages into the skin in which their eggs are deposited. Sleeping with a person, afflicted with the itch is a very dangerous procedure, while a very brief pressure of the hands of a person with itch, will already suffice to transplant one of these little mites upon new ground.

Symptoms. Generally speaking, a patient is first made aware of his having the itch, by an intense itching, which is worse, when he is in a warm bed, than in a cold place. The itching is strongest between the fingers, toes, genitals, upon the legs, abdomen and chest. Objective symptoms are nodules, pustules and vesicles in variable number, which in children and thin skinned persons are liable to suppurate.

Itch never becomes well spontaneously, but is very amenable to treatment, hence it may be considered an innocent, but very disagreeable disease.

Treatment. In as much as the medicine required for the cure of this disease is quite bulky, it cannot be well placed into the medicine chest, especially so, as it is an obsolete disease, hence apply to your next druggist for the following ointment:

R. Carbonate of potash 2 drachm
Sulphur $\frac{1}{2}$ ounce
Lard 2 ounces

M. In aggravated cases get three or four times the above dose.

Take one or two strong soap baths in very warm water, after drying, rub the ointment all over the body, excepting the face, or, at all events, over any spot where any eruptions or traces of itch can be found. This rubbing in of the above ointment must be repeated two or three times a day. By this means the disease can be cured with certainty in from eight to fourteen days. After cure it is well to rub all over the body a little petroleum or coal oil, leaving it on for half an hour and then take a bath. It has a tendency to kill off the last vestige of the mites.

Corns and bunions are caused by badly fitting foot wear. They cannot be removed, if a person with a No. 8 foot, insists to wear a No. 6 shoe. Cutting and paring is the best remedy to make them less objectionable. In corns of early growth, cotton saturated in a solution of common washing soda, tied over the corn, and left there over night, will loosen them occasionally to such extent, that they can be pulled off without pain.

Warts. Purchase a small quantity of nitric acid (poison) and touch the warts with same, by means of a glass stick or piece of wood. It will etch them away.

Sore nipples on breast. Wash carefully three or four times a day with luke warm water, into which a few drops of carbolic acid 10% C. P., Bottle No. 5, has been put. During this treatment the baby must be artificially fed.

Perspiring hands and feet. Can be ameliorated through frequent bathing in cold water. It should not be suppressed under any circumstances.

Chapped hands and face. Apply vaselins, Bottle No. 14, or glycerine Bottle No. 10. If the skin is cracked, before making the application take of Borax, Bottle No. 3, one-half teaspoonful in one-half glass of luke warm water, dissolve, apply to wounds and cleanse thoroughly with the solution before using vaseline or Glycerine.

Diseases of the Organs of Locomotion

ARTICULATION

Its diseases are numerous, and are of great importance, as they often lead to the most serious and permanent lameness. The most common of these is the disease known as the "white swelling," or "osteitis," which is a local inflammation of the bone, and is often attended by a great deal of pain and swelling.

The disease is usually attended by a great deal of pain and swelling, and is often attended by a great deal of lameness. It is often attended by a great deal of lameness, and is often attended by a great deal of lameness.

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Diseases of the Organs of Locomotion.

RHEUMATISM

IS a disease characterized by painful, often multiple local inflammation, usually affecting the joints and the muscles, and sometimes extending to the deeper organs, as the heart. There are several kinds of rheumatism.

Acute articular rheumatism or *rheumatism of the joints*. In this class of rheumatism the synovial capsule of some of the joints, sometimes only one is the seat of inflammatory disturbance.

The predisposition to rheumatism of the joints is very unequal in different persons. Some seem to inherit a predisposition. Those who have had one or more attacks are very liable to have another. The disease is rare in childhood and old age, and occurs most frequently between the ages of fifteen and forty. The predisposition seems to be somewhat stronger in robust and fullblooded persons, than in those who are weak.

Among the inducing causes of rheumatism of the joints, the more important are: temporary exposure to cold, by suddenly wetting the heated body, or by being subjected to a draught, and continued residence in a damp dwelling and working in damp shops.

Symptoms. In some cases the outbreak of the disease is preceded for a few days by general uneasiness and a feeling of weariness of the limbs.. In others the attack begins suddenly and unexpectedly. It does not always commence with fever as in most inflammatory diseases. There is usually a small chill, repeated during the first few days followed by a hot feeling. Just as these fever symptoms begin, or soon afterwards, the patients complain in one or more joints;

moderate at first, but increasing rapidly and soon becomes very decided. As long as the patient makes no attempt to move the affected joints, and is not touched, the pain is endurable; but every attempt to move or the slightest pressure on it, sometimes even the weight of the bedclothes, increases the pain so that the patients often moan and cry till they have remained quietly in a comfortable position protected from any injury. Upon examination, the affected joint will be found to be more or less swollen. If the pain and swelling disappear slowly in the joints first sized, while they develop in others the number of joints implicated at one time may be very large, and the patient's state be very helpless and pitiable. Occasionally such patients cannot make any movement; they are unable to stir from any position in which they have been placed; they fear even the most careful passive motion rendered necessary for urination, stool, eating or drinking. Even slightly shaking the bed increases the pain and induces groans and complains. This extent and severity of the symptoms are not frequent. In most cases two or three, or at least a moderate number of joints are simultaneously affected with severe pain, while the others remain free, or are somewhat stiff and only gain when freely moved.

Fever usually accompanies the commencement of the disease, and during it the temperature is somewhat elevated. Pulse is frequent, to 100 per minute, full and soft. The respiration is hastened, the skin is always covered with profuse perspiration of acid odor. Through this perspiration, thirst is heightened and the urine lessened.

The disease has no regular course, but with varying intensity from one to six weeks or even longer.

The termination of the disease, if it remains uncomplicated with heart troubles, is usually a favorable one.

Treatment. A strong nourishing but easily digestible diet, no hot drinks of any kind, coffee and tea are better eliminated, wines and liquors, including beer are harmful. The room should not be kept too warm, but its temperature should be regular and even as possible. Then give of quinae pills 2 gr. Bottle No. 16, 2 at eight a. m., same at 10 a. m. and two more at noon. At four o'clock give of Phenacetine Bayer, Bottle No. 23, one dose, repeating every two hours till patient sleeps.

The following linament you can prepare and rub it gently, but persistently on the afflicted parts.

Take one fresh egg and place it in a water glass, fill the glass with pure strong vinegar, this will dissolve the egg, shell and all, it takes about twenty-four hours, then add double quantity of turpentine and a few teaspoonfulls of sweet oil, shake well and apply as directed. It is a paltiative.

Chronic articular rheumaism, is the name applied to a chronic, peculiar inflammation of the joints, which usually attacks only one or a few joints, which usually attacks only one or a few joints, and which, in spite of its long duration, induces comparatively little anatomical changes. When it leads to suppuration it is a chronic inflammation. This form of rheumatism often develops from the acute form, but oftener it appears as a chronic form from the start.

The predisposing causes are the same as in acute rheumatism.

Symptoms. Are about the same as in the preceeding, occurring at short intervals, in which the joints once affected, become again so. Persons suffering from this form often become rheumatic at every change of weather, everytime they are expose to a draught and often without any perceptable cause. The joint affected is slightly swollen, very sensitive to pressure, but particularly painful when moved. The fever, which is almost always present, is evinced by continued frequent pulse, constant perspiration, by thick sedimentary urine, and by gradual emaciation of the patient. This form of rheumatism, when once taken root is very obstinate and may last for life.

Treatment. It must be mainly local by using the liniment prescribed in acute rheumatism; to which should be added one teaspoonful of oil of mustard, bottle No. 12. The afflicted joint should be rubbed with this preparation at least four times a day and then be covered with flannel bandages. In the first stages of chronic rheumatism of the joint, cold water douches, applied to the afflicted part, often cures the disease, when in the insipient state by lessening the flow of blood to the inflamed parts. The friction caused by a stiff brush or an electric brush is very beneficial. Patients should wear habitually flannel next to the skin. If pain is very strong the internal medicines prescribed in acute rheumatism should be used in the same manner. Cases of long standing receive much benefit from electricity, if applied in a thorough manner and by a physician who understands his business.

Deforming articular inflammation are those swollen misshapen joints, and is usually the consequence of rheumatism not properly cared for.

It will mostly be noticed in persons not having the means to treat rheumatism when afflicted with it.

Treatment. Little hope for cure can be extended to the sufferers with this disease unless they can go to the famous baths at Toplitz, Bohemia. Cures have been effected there.

Muscular rheumatism is applied to all rheumatic diseases which affect the muscles, fascia, the periosteum and other fibrous tissues, except the joints.

Symptoms. The most important and usually the only symptom of muscular rheumatism, is the stretching and tearing pain. Moving or rubbing the affected tissues increases the pain, while pressure will generally diminish it. The skin covering the part does not appear red or swollen, or warmer than the surrounding parts. The pain is usually more violent towards evening and lets up towards morning. It is generally made worse by cold and dampness, and improved by dry warmth. But sometimes the warmth of the bed increases the pain. Muscular rheumatism is sometimes wandering, that is, the pain leaves one place and appears in another. Then, again, in others it remains fixed to a certain muscle or groupe of muscles. It can occur in almost any part of the body, sometimes gradual, then again with a surprising rapid occurrence. The latter is specially the case when rheumatism attacks the loins, when it is usually called "lumbago."

Treatment. The best constitutional remedy for muscular rheumatism is a good sweat. Therefore make for your patient a very hot lemonade, using the juice of two lemons, which must have been peeled before the juice is squeezed out. Put him to bed and cover him with blankets and keep him in perspiration as long as possible. Liniments, plasters, ointments do not do much good. Of local treatment, "Massage" "stroking" and "kneading" the painful muscles is of much benefit and should be resorted to after the sweat. In very painful cases give one or two doses of phenacetine bayer, bottle No. 23. Patients afflicted with this class of rheumatism should habitually wear flannels, both winter and summer and avoid cold damp places.

Gout or Podagra is the result of overindulgence in the pleasures of the banquet table, or who drink champagne, wines or beer regularly and take little or no exercise. The disease is also hereditary.

Symptoms. An attack of gout almost always comes unexpectedly, in spite of the previous warning, and surprises the patient like a thief

in the night. After he has gone to bed, without dreaming of the coming evil and has gone quietly to sleep he is awakened, generally soon after midnight by a severe, burning, piercing pain in the joints of the great toe. The pain rapidly becomes unbearable. The patient feels as if the afflicted joint was in a vice. He sighs, moans, throws himself around in bed, the leg or even the entire body trembles with pain. Soon after the attack the skin covering of the affected joint becomes swollen and reddened, and there is fever, with a full bounding pulse, dry skin, intense thirst and great mental excitement. Towards morning there is usually a remission and during following day the suffering becomes endurable. The next night the scene of the past one is repeated, but with less severity and so on, until the attack abates, and the patient is temporarily free from his trouble. The first attack of gout hardly ever leaves any deformity, nor does it affect often any other joint than that of the great toe.

After the patient has recovered from his pain and sleepless nights, he usually feels better than before the attack.

Treatment. Gout can only be treated by regulating the habits of the patient. Gouty patients should not go to big dinners, even if they promise to be very moderate. It is best for them to eat only vegetables, soups, etc., etc., and to have meat only once a day, which must be entirely without fat. The use of alcoholic liquor, wine or beer retards the transformation of the tissue and hence is injurious to gouty patients. Persons but little inclined to the production of fat under the regular and free use of wine, liquor and beer, become very obese, and from this mode of life most persons have a red face and distended veins until their digestion is impaired or there is some other injurious consequence. This consideration, as well as in the fact that in persons who drink neither wine nor beer the occurrence of gout is very exceptional, should induce any one afflicted with gout to abstain therefrom entirely, or at least to stop their use gradually. The same is true of the use of tea and coffee. Although there is but little nutritive material in these drinks, still there is no doubt that tea and coffee have the same influence on the transformation of tissue that wine and beer have. Tea and coffee preserve the strength, diminish the need of nutriment, limit the consumption, and hence, are injurious to gouty persons.

Drinking large quantities of water has just the opposite effect on the transformation of the tissues, from what is induced by the use of tea,

coffee, beer and wine. After drinking freely of water no one feels less need of food, fatigue is not better borne, it does not induce corpulence and a red face, on the other hand it has been shown that, when plenty of water is taken, the amount of water passed is greater, than it would be under like circumstances, without this increased supply, and as the amount of urea excreted after drinking plenty of water is increased permanently, it is of the utmost benefit to gouty persons. Since muscular action also hastens the transformation of tissue and the consumption of the constituents of the body, it may be readily seen that a lazy, easy life is bad for gouty patients and that very active exercise is of the utmost importance in its treatment.

In gouty attacks no internal medicines should be given, but the pain will be lessened by the free use of ice cold lemonade.

Do not use on the aching joints any cold compresses or hot poultices, it will only increase the pain. In very acute pains during the attack give patient every fifteen minutes about a half glassful of water as hot as he can drink it.

During the attack the afflicted limb should be elevated and covered with cotton or wool and the patient placed on a very low diet.

There is no disease which shows the imperfection of medicine or sets the advantage of temperance in eating and drinking, as well as healthy exercise, in a stronger light than this.

Rickets Rachitis, a disease which effects children, and which is characterized by bulk heads, crooked spine and limbs, depressed ribs, enlarged and spongy enlargements at joints, swollen abdomen and short stature, together with clear and often premature mental faculties. The essential cause of this disease seems to be nondeposition of earthy salts in the bones. Children afflicted with this malady walk and stand unsteadily.

It occurs mostly in children from six months to the sixth year. In some families the tendency of it seems to be hereditary. Improper nutriment of children is undoubtedly the most frequent cause of the disease. Especially the feeding to children of articles of food that grown persons can hardly digest, has a tendency to cause in the little one's intestinal and gastric catarrh. It is a well known fact that rachitis is of very rare occurrence in well nourished children who have an unimpaired digestion. This is best preserved in the little ones by giving them their natural food, the mother's milk, provided the mother

is a healthy woman, and is enabled to provide in that way sufficient nutriment.

Symptoms. Impaired digestion and improper food usually causes in the babies chronic intestinal catarrh, with diarrhoea at first green and mucus subsequently copious and watery. If this system is allowed to run on and the child shows strange formation in its bones, rachitis may be considered as a natural consequence.

The first symptom that rickets succeeded the diarrhoea is the pain that the children unmistakably suffer when they attempt to move their limbs, or when they are moved by any one. Children whose greatest pleasure has been to kick out their legs and put their toes into their mouth, then lie quiet, with their thin legs held straight out as if afraid to move; how they cry at every motion and even begin to whimper for fear of being taken out of bed when persons that they had formerly loved approach them. These symptoms are succeeded by enlargement of the ends at joints, and especially noticeable at knee and elbow and also at the ankles.

If rachitis begins in the manner above described, from diarrhoea, that is, if it begins when the child has not attempted to walk, it often escapes any distortion of the extremities even if the disease lasts for years. This shows that the curvatures, such as bow-legs and partial fractures of rachitic bones, are chiefly due to the weight of the body resting on them. We must also mention that chronic bronchial catarrh is the most frequent complication of rickets early in life; its absence is exceptional. In this case teeth are generally cut very late, and often irregularly, it frequently happens that a child is a year old before it has a tooth in the mouth. If the disease ends in recovery the first signs of improvement is generally a decrease of emaciation. The loose skin is again filled by the limbs, the wrinkled and old faces grow smooth, while the protuberant belly becomes smaller. After a while the children begin to sit up in bed and play. At this time there is great danger of curvature of the spine, and permanent distortions of the whole spinal column. At the beginning of convalescence, curvatures and partial fractures of the extremities also are most likely to occur when the children attempt to get out of bed and walk around holding on to the chairs. When the children attacked by rachitis are two or three years old, the ribs and back bones escape at the commencement and the extremities become first deformed. They are affected with curvatures, and partial fractures, whose directions are

not always the same. The thighs are usually bent outward, the legs inward; the children acquire a clumsy waddling gait. It is often a longtime, often many years, before the disease extends to the whole skeleton. Even if successful in arresting the disease in the first stage, the small size, the misshapen limbs, bow-legs, remind one through life of the rickets that occurred during childhood. In severe cases very unsightly curvatures and shortenings of the bones remain, which not infrequently impair the functions of the body.

Treatment. In cases where the chronic intestinal catarrh is the cause, this disease should be first battled with, as laid down under that head. If you succeed in curing the intestinal catarrh speedily and completely, and improve the nutrition, the rachitic symptoms, induced by these disturbances, also generally disappear in a short time, and if the disease be recognized early, the children escape any permanent results of the rickets.

Where the cause is not from diarrhoea, the bones must be strengthened by the administration of cod liver oil, of the purest quality, commencing with ten to twenty and gradually increasing the dose to a teaspoon ul. Cod Liver Oil is a specific in rickets. Brine baths are also of unmistakable benefit and should be used, particularly if the children are not too much emaciated. The children must not be given any vegetables, at least very little, and should be exclusively fed on an animal food. The administration of a small amount of finely scraped beef from which every vestige of stringy matter is removed, twice a day given raw, will soon show its beneficent work on the little patient. Commence with about a quarter teaspoonful, and in this stage are very much excited or delirious; others lie benumbed increase gradually, but do not overdo the same.

Rickets can never be cured, if the youngsters are kept in a damp dark room, where no fresh air is admitted. In good weather they should be sent out of doors as much as possible.

To guard that rachitic children do not become bow-legged, be careful not to put them on their feet, and to avoid curvature of the spine you must not let them sit up in bed any length of time. They should lie as much as possible till their little bones lose the softness. Children afflicted with this disease should lie on hard mattresses and never on feather beds or very soft quilts. High quilts must also be avoided. Rachitic children should never be carried around much, but be places in a baby carriage, in which they can assume a lying

posture. Until the bones are consolidated, sitting up in bed for any length of time must be prohibited, and still more should the parents forbid the children running about on their flexible, fragile legs. If the curvature has already occurred, you should send your child to some reliable institute, where such diseases are specially looked after, or at least consult a surgeon with a view of having some apparatus made, which will straighten out the curved limbs or spine.

Osteomalacia or *softening of the bones*, is a rare but frightful disease, and no case is known, which has ended in recovery, it defying all medicines.

Constitutional Diseases.

MEASLES

IS a purely contagious disease. It is certain that the blood, tears and secretions of the air passages are vehicles for the contagion, for inoculations made with these fluids have induced measles in previously healthy persons. But, as the disease most frequently occurs in persons, who have not come in direct contact with either the blood or secretions of measles patients, but have been near those affected with the disease, no doubt can be entertained, that contagion is also contained in the emanations from the skin and lungs. It has been proven that this contagion in the atmosphere can, without losing its activity, be carried for miles by the body and clothes of healthy persons, who have been near a patient, and who are not themselves attacked by the disease. The period of incubation lasts from ten to fourteen days. Measles are most infectious while the eruption is out, and not so much when the scales fall off. The popular opinion, that measles are most catching in the scaling off stage, arises from inattention to the period of incubation. A child infected by its brother or sister breaks out with the disease while the latter is changing its skin, it is true, but was infected while the eruption was at its height, or perhaps even before the eruption. The probability of the infection during the periods mentioned, is supported by the wonderful spread of measles through schools. Great care is usually taken to keep out of the school any children, who have gotten through the scaling period as well as those having any suspicious eruptions, but children with catarrh and cough are allowed to sit on seats in the neighborhood of well children.

The predisposition to measles is very extended. Almost every one has the disease once during life, but one attack almost invariably exhausts the susceptibility to new attacks. Most persons are attacked

during childhood and have lost the predisposition when they are grown up. Children under six months of age often escape during an epidemic of the disease.

Symptoms. During the period of incubation there is no sign of the disease. This is followed by the first stage, or forerunner, initiated with repeated weak chills, and accompanied by all the symptoms of a severe catarrh. Unless it is known, that there is measles in the neighborhood, the most experienced physician can hardly recognize in the existing catarrh the forerunner of measles. Increased frequency of pulse, heightened temperature, constitutional disturbances, pain in the head and limbs, dyspepsia, nausea, vomiting, disturbed sleep, etc., also occur during simple catarrh, from catching cold. The local symptoms are generally very decided, the burning, reddened eyes are filled with tears, there is pain in the forehead, the nose is stopped, and discharges a copious, limpid, salty secretion; attacks of sneezing occur at short intervals and often continue for hours, the voice is husky, the painful cough is hoarse and barking; and at night the mother or nurse are afraid that croup has set in.

The second or eruptive stage commences with an increased violence of the fever, the pulse becomes more frequent, the bodily temperature rises to the highest point and in isolated, very violent cases, it comes even to convulsions. The eruption of pale red, rather undefined spots upon the mucous membrane of the cheeks, gums, lips, and back of mouth, spreads then to the face, especially about the mouth and eyes, and soon to the neck and breast; in about twenty-four hours it reaches the feet, so that the whole body is covered. At this time the perspiration of the little patient has a peculiar odor, which strongly reminds of a freshly picked duck or goose. During the eruptive stage, the constitutional disturbances and catarrhal symptoms usually increase and attain their height. The blooming stage cannot be distinctly distinguished from the eruptive stage for in most cases it is at its height, as the eruption is completed. The fever also, which attains its height at the completion of the eruption, rapidly moderates, and sometimes disappears in the blooming stage. It is at this time that the parents have great difficulty to keep in bed the little patients, who are often still covered with red spots, but are already full of spirits. The catarrh continues but is of a much milder form, the secretion from the nose is more scanty and thick, sneezing is rarer, the voice less rough, the cough looser. On the third or fourth day after their occurrence,

they are much paler or have entirely disappeared, commonly leaving a bright, yellow discoloration on the skin for a time.

The fourth stage, or scaling period, sets in on the eighth or ninth day of the disease. At this time the spots have entirely disappeared, and their former seat is covered by a bran-like scurf. If the detached scales be softened and *macerated* by constant perspiration, the scaling is not so evident, as if the skin be dry, hence it is less perceptible on the parts covered by bed clothes, than on the face, neck and hands. In this latter stage the fever has generally disappeared. Catarrh also passes off gradually, and about the fourteenth day or sometimes a little later, as the scaling off ends, the measles terminate. Measles, if they run in above described course, always terminate favorably, but sometimes they are complicated with other diseases and become dangerous.

Treatment. The only effective prevention is a strict isolation of healthy persons, who have not had the measles from those in whom the disease has broken out, as well as from those who are suspected of being in the commencing stages. To protect children from the affection it is necessary to keep them out of school, and it is still better, if possible to send them away from the place where an epidemic is raging. Of course, in mild epidemics, this latter precaution will not be often resorted to, because we know that sooner or later, almost every person has the measles, but in those epidemics characterized by their malignancy and fatality, it cannot be too high recommended.

If measles have once broken out in a person, we must remember that there is no remedy for cutting short the attack, and that the majority of medicines usually given, do more injury than good. The great majority of cases end in recovery without any medical treatment. All patients who have the measles should be kept in an even moderate temperature of 60° to 65°, which must be regulated by the thermometer, and not by guesswork. The chamber must be aired every day, while a thin cloth is thrown over the face of the patient and his bed is protected from draught by means of a screen. The little patient should be washed once a day and the linen changed, whenever necessary. But both these operations must be done quickly and without unnecessary exposure. The water used in washing should be luke warm. The body and bed linen should not be taken from the clothes-press and placed directly on the patient, but should be first warmed and aired, or, still better, worn for a night by some well person. The chamber

should be darkened in proportion to the eye troubles of the patient. If you make the room too dark, you render the eye trouble worse, for the patient is dazzled every time the door is opened, and light enters the room. In the beginning and up to the close of the eruption stage, the patient should have nothing but water soups and toasted bread, and if constipated, stewed fruit. During the rest of the disease, the patient may return to his customary diet. Simple cold water, that has stood in the room for a while, should be freely given, as it is never injurious, and does not even render any of the symptoms worse temporarily. On the other hand, it is cruel and injurious to withhold from the patient the only thing that will quench his thirst, as long as he is feverish and thirsty, and in place of it make him drink warm tea or water. The time that the patients are to pass in bed, and in their chamber, should not be measured in the customary way by days and weeks, but they should remain in bed as long as there is the slightest indication of fever, while the peeling off is going on and the cough is severe and should even keep his chamber as long as there is any trace of measles, catarrh, whether the customary fourteen days or fourteen weeks have elapsed. If in the beginning of the disease, the patient is attacked by very severe hoarseness and shortness of breath, which sometimes occur, especially during sleep, awake the little sufferer and apply hot applications to throat and give plenty of hot drink, or try by the spoon method, to have the patient vomit. If diarrhoea sets in give the child a parched flour soup, it will stop it. If during the stages of eruption and blooming, the fever is very high, give once a day, in the morning of quinia, Bottle No 16, one pill, one grain (small size.)

Scarlet fever is also an infectious disease. Little is known about scarlet fever poison, but it seems to be evident that the poison is contained in the exhalations of the patient and is mingled with the atmosphere about them. Well proved facts, also render it probable that the contagion may be carried by persons who are not afflicted with the disease. The period of incubation lasts about eight or ten days. It is, however, hard to say when the infection terminates, and it is also doubtful in what stage scarlet fever is infectious.

The predisposition to scarlet fever is far less common than that of measles; there are a great many persons who never have had it. One attack almost unexceptionally removes the liability to another. Nursing children often escape during an epidemic, while those over two years old are most susceptible to the disease, but even adults who

have not had scarlet fever during childhood are often attacked by it, and cases even occur in old age.

Symptoms. Scarlet fever is quite a serious disease, as many will testify, and has perhaps put many a parent's heart into deep mourning for the loss they sustained. During the stages of incubation some patients complain of weariness and depression and an undefined feeling of sickness, but most of them feel quite well.

The prodromal stage or precursor begins with repeated chills. This is followed by a feeling of burning heat, nausea or actual vomiting, severe headache, feeling of great relaxation, pain in the limbs and the series of symptoms that accompanies almost any severe fever. Even at this time the pulse is often 120 or 130 beats a minute, and the bodily temperature occasionally arises to 104° or 105° . Such an increase of temperature is not often observed at the commencement of other diseases, even in inflammation of important organs, hence these symptoms alone excite the suspicion that your patient is in the first stages of scarlet fever. The patient complains of a feeling of dryness and heat in the throat, and of pain which is increased by swallowing. On examining the throat, you will find the mucous membrane of the tonsils and soft palate dark red* and swollen. In some cases the tongue is already very red at the edges. Occasionally the prodromal stage only lasts a few hours, or the eruption may occur almost at the same time with the fever, so that there is no real prodromal stage, but in most cases this stage lasts one or two days. The intensity, as well as the duration of the prodromal stage varies very much in different cases, due to unknown causes. Some patients during this stage are very much excited or delirious; others lie benumbed and apathetic; children not unfrequently have convulsions the same as in other febrile diseases. The eruptive stage almost always begins with an increase of fever. The symptoms accompanying the fever, also the headache, weakness, excitement, and apathy increase, and it is at this time that convulsions most frequently occur in children. The eruption does not first appear on the face, as does that of measles, but begins on the neck and thence extends over the body. Even in twenty-four or thirty-six hours, the whole surface is usually covered with a scarlet color. In the face the cheeks are generally red, hence the discoloration is less readily recognized here than elsewhere. The deepest redness is usually on the neck, outside of the limbs, joints, hands and feet. The exhalations of the patient smell like mouldy

cheese. When the eruption appears the throat trouble increases, the back part of the mouth becomes intensely red, the tongue is of a dark raspberry redness, not only at the edges, but at its back, from which the previous coating is thrown off. During the stage of eruption there is variations from the above symptoms which have no material effect upon the course of the disease. For instance, the discoloration spreads over the surface with uncommon rapidity; sometimes the redness is brighter, at others much darker. In the same way the throat troubles are very severe, again very light. They are seldom accompanied by catarrh.

In the blooming stage, which usually lasts four or five days, the fever at first increases, reaching its height about the second day. At the same time the eruption is at its bloom and the throat trouble has reached its height. The general health of the patient is also most effectual at this time. After this all the symptoms usually begin to decrease, the frequency of the pulse and temperature go down, the discoloration fades, the difficulty in swallowing grows less and the general health improves.

The peeling off usually begins on the fifth day after the disappearance of the eruption. While the eruption continues to some extent in the extremities, especially about the joints, it disappears about the neck, and here you will first notice that the skin is rough and dry, the epidermis is raised and falls off in small shreds. A few days later the redness usually disappears from the extremities also, and peeling off begins. During this, which lasts from eight to fourteen days, the last traces of fever and inflammation about the neck disappear, and, when the disease runs a favorable course, it ends in perfect recovery during the third or fourth week.

If the course of scarlet fever was always as in the foregoing description and run in this benign form, not many victims would pay the tribute of death to it. But it is not to be so, and how often does this virulent disease become complicated with others, and the patients, mostly young in years, must give up their lives to the great sorrow of father, mother, brothers and sisters.

Treatment. As the disease favors complications, it is always best to call in the family physician in the earlier stages and follow his directions as to medicines. Scarlet fever when once set in must run its course, just as measles, and if not complicated needs no medicines at all, and the complications only must be fought against with drugs.

Prevention is always better and cheaper than cure, and what was said in this regard in the case of measles holds good here.

The sick chamber should be kept at an even temperature, not exceeding 60° or 65° , and do not weight the patient down with covering. Freshen the air in the room occasionally by opening the window and have the little patient carefully washed daily. The best drink is pure cold water or lemonade; as nourishment, give water soups, toast, stewed fruit; later, in the convalescent stage, meat broth, milk, etc. In case of constipation give injections of lukewarm water. It is an old custom to keep patients in bed until the cuticle has peeled off completely, and it is well to keep up this practice. Even after the peeling off is entirely completed, the patient should be protected from cold and in winter should be kept in his room for at least a fortnight. During this time he should take several baths in lukewarm water.

We cannot urge too strongly to call in an experienced physician, to combat with the numerous complications which are liable to arise which cannot be generalized in this work.

Smallpox. It spreads solely by contagion. Smallpox poison, which is only known from its effects, is contained in the pustules, and in the perspiration of the patient having the disease. The poison is most active at the period when the clear contents of the pocks begin to turn slowly. Smallpox poison is very tenacious of vitality; it is not destroyed by drying. It clings for a long time to objects that have been near a patient with the disease, and where protected from the air, remains active for years. The liability to smallpox is common to all mankind, but expires almost entirely for the rest of life after one attack.

The disease artificially induced by vaccination with the cow-pock, has a similar effect on the predisposition. In some persons it seems to remove the tendency to the disease for life, while in others only for a number of years.

Symptoms. During the period of incubation there are usually no signs of the disease, either in mild or severe cases and this stage usually lasts for 12 or 14 days.

The first stage of smallpox commences with one or more chills, this soon give place to a feeling of permanent heat. Pulse is full temperature up to 104° and 106° , face reddened the arteries of neck pulsate strongly, patient has great thirst, loss of appetite, a bruised feeling of the limbs, coated tongue, slimy taste, nausea and vomiting.

Sleep is restless and broken by dreams. Some patients become delirious. After imperfect remissions during the second and third day the fever and accompanying disturbances usually increase and attain their height on the coming of the third day.

The second or eruptive stage almost always begins with the appearance of the first pimple on the third day of the fever. It begins at the face, and on the next day the eruption usually spreads from there to the neck, breast and back, and on the third day to the extremities. The number of pimples on the body and extremities is usually far less than on the face. The pocks appear late on the extremities, they also develop late. The eruption on the mucous membrane begins at the same time it does on the skin, but is not generally noticed, as it does not cause much trouble at first. The pox in the mouth increases the flow of saliva; in the back of mouth, difficulty in swallowing, in the air passages, hoarseness and cough; those on the eye, the flow of tears. The fever, the severe pains in the loins, and the constitutional disturbances, which attain their height towards the end of the first stage, always reunite when the eruptions come out, decrease still more as it extends to the body and towards the end of the eruptive stage the patient usually feels quite well. The third or suppurating stage begins about the sixth day after the first appearance of the eruption, and about the ninth day after the first symptoms of the fever. The pocks become larger; the bluntness of their summit give place to a half round shape. If they be punctured, their thick purulent contents escape all at once. The skin around the pocks swell decidedly, and become dark red. The redness and swelling becomes diffuse. The patients are greatly disfigured, and complain of severe, tense, pulsating pain in the reddened skin, which is covered with large pustules. More or less of these pustules rupture and their contents flow over the surface, where they dry into crust, which at first are yellow, subsequently brown. The suffering at this stage is intense. The fever which had moderated or even disappeared during the eruptive stage, returns with all vehemence during this suppurative stage, and begins anew with repeated chills.

The fourth or drying stage usually begins on the eleventh or twelfth day. During this stage the fever gradually subsides and the dried up scabs begin to fall off. It is at this period where the smallpox pits become apparent, and not unfrequently, a previously beautiful countenance is rendered disgustingly ugly by smallpox.

The foregoing is a description of the more violent forms of smallpox, some pass off a great deal easier and then are called "*varioid*" and usually persons, who have been vaccinated are afflicted with this form when they have come in contact with the virulent form of smallpox and their system was not thoroughly cleared through the vaccination process. The death rate in the latter is scarcely four per cent.

Treatment. The only one is the preventive treatment, which consists in vaccination and revaccination. All objections to vaccination, even if well founded, would have to give way to the facts proved by statistics, that in the last century one-tenth of the population died of smallpox, another tenth were disfigured by the disease, and, that since Dr. Jenner's great invention and the introduction of vaccination, the general mortality is less, and that of smallpox is reduced to a minimum. During an epidemic persons, who have been vaccinated, but in whom the vaccination has not yet taken, are attacked by smallpox and the two diseases run their course at the same time without modifying each other. This shows that vaccination cannot cut short the disease, during incubation, also that the susceptibility to vaccination is not lost during this stage. Besides vaccination and revaccination no one should be deterred by any sentiment or personal consideration from exercising the most stringent rules for the isolation of smallpox patients, even if they should be very annoying for the patient and his friends.

There are no medicines known to science, which can cut short the disease and averting dangerous accidents. In the first stage the patient should be kept moderately cool, the temperature at about 60° F., bedcovers should not be too heavy, the patient should not be dosed with warm tea, but let him have all the cold water and lemonade he wants, light diet, and if the patient is constipated administer an injection of luke warm water, one-fourth of which is pure cider vinegar. During the eruptive stage the most attention should be paid to the fever and if it becomes alarming, administer large dose of quinae, Bottle No. 16, 3 to 4 of the large pills. In the drying stage the patient should have an early digestible but nourishing diet. The patient should be warned against scratching off the crust and measures should be taken to prevent his doing so during sleep. If the crusts be firmly adherent, and specially if suppuration under them continue, apply corn or linseed meal poultices, medium hot. It is hoped to be needless, to advise, to call in a physician several times during the course of the disease, for the purpose of prescribing such

paliatives as circumstances may call for, and which can not be generalised and also to counteract the numerous complications this disease so often brings forth. All clothes of a smallpox patient, including the bedding he has used, should be burned after cure or demise.

Chicken Pox, also called wind, water or sheep-pox is an infectious disease and usually appears in more or less extensive epidemics.

Symptoms. In some cases the appearance of the eruption is the first symptom of the disease, in rare cases, however, the discoloration is preceded for a day or two by slight fever and general discomfort, derangement, loss of appetite, headache, etc. The eruption spreads spreads over the body without any regularity, but is usually thickest on the back and breast. The face often remains entirely free. Individual pimples develop in from six to twelve hours. their contents become cloudy the second day and dry up on the fourth. It is rare to have only a single crop of pimples; new crops usually appear for several days, so that the disease is often protracted for a fortnight, or even longer. The disease is not accompanied by constitutional disturbances.

Treatment. Is scarcely necessary, as the disease is not in the least dangerous, or very inconvenient, and always terminates in recovery, after lasting a week or two. Notwithstanding this, it is advisable to protect the patients from all injurious influences, cold, draught, etc., while the disease lasts, and keep them in their room. The diet must also be regulated and is to consist mainly of milk, eggs, toast and nourishing soups. As a drink give cool water. Prevent the scratching off of the scabs.

Typhus Fever, also called *spotted fever* is very closely related to the previously described infectious diseases, measles, scarlet fever and smallpox, by its contagiousness, and by the local affection of the skin in the shape of extensive discoloration, but its symptoms on the other hand, also, resemble very much the typhoid fever, to such extent, that many authorities consider it a variety of the latter. The disease is very contagious and the contagion is contained in the air about the patient, in his clothes, bed, linen and other property. Hence the treatment and nursery of patients with scarlet fever is much more dangerous than is the case with patients having cholera or typhoid fever. Like measles, the disease may be carried by persons who do not themselves become affected. The susceptibility miasm or contagion of typhus is very general. Males and females, strong and

healthy persons, weak and sickly ones are about equally liable to the disease. Only early childhood and extreme old age usually except.

Excess in exertion and other debilitating influences appear to increase the predisposition. One attack seems to destroy the susceptibility to the affection.

Symptoms. There are few diseases, whose symptoms correspond so exactly in different cases, and which run such similar course in different persons as typhus fever.

The period of incubation lasts about eight or nine days, during which slight chills, headache, disturbed sleep, loss of appetite, a feeling of dullness, depression and discomfort, in fact a series of symptoms, which also appear at the beginning of other diseases, and giving no special clue to the disease which is about commencing. It only during a prevalence of typhus, that these symptoms arouse suspicion, which increases almost to a certainty, then, if the symptoms are accompanied by catarrhal troubles, cough, burning sensation in the eyes. The invading stage begins with a single protracted chill of great violence, or with repeated slight ones, followed by a continued feeling of great heat. After the first chill, the patient is not able to leave his bed; they feel excessively fatigued and weak, complain of heaviness and numbness in head, and headache. These symptoms are followed by dizziness, flashes of light, deafness, pain in muscles, trembling of the limbs. The patients lie usually in a state of apathy, talk in their sleep, and even while awake, emitting delirium. Some are very excited and restless, have anxious, wild fantasies and can scarcely be kept in bed. Besides these symptoms of disturbed innervation, there are almost always signs of intense catarrh during the invading stage, the eyes shun the light and are red, there is an increased flow of tears, the nose is dry and stopped up, the act of swallowing also is often difficult and painful, tongue has a white coating, the taste is slimy, temperature 104° to 106° , pulse large and about 100 to the minute, thirst is very great.

With the first appearance of the rose rash, which occurs in the second half of the first week, the eruptive and blooming stage begins. At first the spots are few in number and only appear on the trunk, then on the neck and extremities, till finally the entire body except the face, is covered with them. The discoloration lasts usually till the end of the second week. The general symptoms do not improve with the outbreak of the eruption. The patient complains, however,

less, from pain in the head and limbs, this is only because their mind is more affected, they cannot think clearly, give slow and complete answers to questions and after their recovery scarcely remember this period, during, which they are in a quite or noisy, violent delirium, and often make constant attempt to jump out of bed and run away. Towards the beginning of the second week, while the discoloration becomes more livid, all the symptoms increase and attain their height about the middle of the week. The patients lie almost constantly on their back, eyes half closed, knees rolling outward, the hands between the thighs, and are in a deep stupor, from which it is with difficulty to arouse them. From time to time they mumble unintelligently, make grimaces, gesticulate, pick the bedclothes, attempt to rise and to thrust the feet out of bed, and it is evident, while all shame and propriety is gone and the real world is lost to them, they still live in an imaginary world, and their minds are more or less active. They do not appear thirsty, but show great avidity for drink when you offer them a glass of water, but they often fail to quench their thirst, because the tongue trembles or is stiff, and the act of swallowing has become difficult. In many patients while undergoing this period, numerous other diseases make their appearance, helping of course, to complicate the already serious disease. Pneumonia, parotitis, kidney diseases, and collapse of the lungs are of frequent occurrence.

The third or critical period usually begins in the latter part of the second week. Before actually seeing such cases, it is almost impossible to imagine the wonderful change in the symptoms during a single night, in the critical period. In no other disease is there so rapid a change, from an apparently hopeless to a very comfortable state. After a peculiar marked increase of all the symptoms the patients fall into a quiet sleep for several hours, from which they awake with unclouded minds, but usually without any recollection of what they have passed through for the previous days or weeks. During this critical sleep, the temperature often falls four degrees, the pulse twenty or thirty beats; the dry heat disappears from the skin, and gentle perspiration ensues. The rose rash also becomes pale. In favorable cases the cooling off is immediately followed by convalescence, which, however, is always slow. The patients sleep a great deal, upon awakening their intellect becomes clearer, although they retain an idiotic, stupid expression for weeks. The dirty coating is thrown off from the tongue and teeth, the tongue becomes moist and

appetite returns. Skin begins to peel off. Temperature and pulse become once more normal. But even in best cases weeks pass, before patient can leave his bed and move about his room. In many cases the mental vigor returns slower than the bodily strength. During this last stage the wasted and emaciated condition of the patient is very liable to contract new disease, and his impoverished body, not being able to withstand this new strain, succumbs.

Recovery is by far the most frequent termination, if complicating diseases do not make their appearance.

Treatment. No remedies are known to combat or arrest typhus fever, and the physician, who naturally will be called in, will have to be entirely guided by the symptoms, which manifest themselves, and which threaten the life of the patient, particularly the high fever will have to be looked after. If you are aware, that the physician you call in, knows what he is about, follow his instructions implicitly and your patient will be very soon on the road to recovery.

Typhoid Fever, or *abdominal typhus*, is a disease, which was formerly confounded with Typhus, described in preceding chapter, but differs very essentially. It is characterized by fever, lasting usually three or more weeks, diarrhoea with stool resembling pea soup in appearance, and prostration and muscular debility, gradually increasing and often becoming profound at the acme of the disease. Its local lesions are a scanty eruption of spots, resembling flea bites, on the belly, enlargement of the spleen, and ulcerations of the intestines over the area occupied by Peyer's glands. The virus or contagion of this disease is a microscopic vegetable organism and is not so intense as that of the spotted fever. This virus clings particularly to the dejections of the patient, and persons who are exposed to the stools of them are most apt to be infected. It is very doubtful if the contagion be transferred by the exhalations from the skin and lungs, as in spotted fever. Infection of the nurses and physicians is rarely seen in typhoid fever, and, when it occurs, it is always questionable, whether it be due to the emanations from the patient or from his dejections. At all events, using the bed pans, night stools, and privies, where the dejections of the patients have been emptied, appears more dangerous, than being brought in contact with the patient.

The miasmatic origin of typhoid fever is a well known fact, and the contagious matter is often transferred to the body by drinking water, which comes from surface wells, which are supplied with water

filtered through cesspools, or adjacent cemeteries. In fact any drinking water, which has been in contact, more or less direct with decomposed animal or vegetable matter. It can also be caused through inhalation of air, emanating from places, containing decomposed matter and in process of decay, sewer gas, or noxious gases arising from privies in close proximity to living or sleeping rooms.

The susceptibility to typhoid poison varies greatly with the individual. Persons of old age and infants are seldom attacked, but those of middle age are most liable to it; males are more often attacked than females; strong and vigorous persons oftener than weak ones. Pregnancy gives almost absolute immunity to the disease. Except in very rare cases, one attack removes the susceptibility.

Symptoms. In many cases, the evident commencement of the disease is preceded for days or even weeks by indefinite premonitory symptoms. These forerunners are feelings of general illness, mental disquiet, great dullness, and relaxation, loss of appetite, indigestion, restless sleep disturbed by dreams, headache, dizziness, wandering pains in limbs, which are usually considered rheumatic, and nose bleeding.

The disease proper begins, however, when the first chill occurs during the above mentioned symptoms, or if there have been no forerunners, when the chill notifies the patient of his illness. The chill is rarely so severe and continued as in intermittent fever or pneumonia; there is usually no shivering and chattering of the teeth.

Even during the first week the patient becomes very weak and much prostrated, but few can leave their beds during the first days; at the same time they complain of headache, which is chiefly in the forehead; of buzzing in the ears; flashes before the eyes, dizziness, which is particularly severe, when they rise in bed, or attempt to walk. The sleep is restless and broken by dreams, in which the patient often speaks single words, or whole sentences, in a loud voice. During the first week, the patient, while awake, is usually perfectly conscious, but shows little interest in things around, and answers slowly and unwillingly to questions. There is great thirst, no appetite; there is a slimy or bitter taste in the mouth. Occasionally there is diarrhoea, but the bowels are usually constipated, and it is not till the end of the week that the patient has several pulpy or even fluid stools daily. Under no circumstances should an emetic, or injection be given, as it will invariably produce severe diarrhoea, which it is

nearly impossible to stop. During first week of typhoid, there is often repeated nose bleeding, which is not apt to be abundant, and which relieves the headache. There is also usually bronchial catarrh.

Even during the first days the abdomen is generally painful, and is very sensitive to pressure in the soft parts above the hips, the naod and stomach. The belly is very tense and somewhat pulled up. Towards the end of the first week, the spleen becomes enlarged, and when patient lies on right side, with left arm over head it can be plainly felt back of the stomach. Toward the end of the first week, on careful examination, you often find a few pale red rose rash spots, about the size of a lentel, on the abdomen and breast. The most important objective symptom is the fever. The temperature rising gradually, higher in the evening than the preceding morning. Pulse 90 to 100 beats per minute and often higher.

In the second week of the disease the complaints of pain in the head and limbs cease, but the dizziness becomes worse and the noises in the ears are accompanied by deafness. The expression becomes more stupid, the inattention greater; the intellect, which was usually clear during the first week, becomes cloudy, and the patient gradually falls into a somnolent, stupid state, from which he can only be aroused with difficulty, and for a short time. In spite of the dry mouth he manifests no desire for water, but drinks with avidity, when a glass of water is placed to his lips. Towards the end of the second week, the stools and urine are often passed in bed, because the patient does not perceive the necessity of evacuating the distended rectum or bladder. Many patients lie unconsciously on their backs; if placed on the side, the body and limbs follow their own weight, without the patient making any attempt to change his position, even if it be uncomfortable. The occasional trembling of the lips, or a few incomprehensible words that the poor sufferers mumble, alone show that the mental activity is not all lost. Other patients who are just as insensitive to the external world, who denude themselves without any modesty, do not answer questions, show by their whole manner that they are living in an excited dream; they are constantly agitated, throw off the bed clothes as fast as they are replaced, attempt to stand up or run away, talk loud or disjointed words, gesticulate, speak unknown tongues and become morose and angry when they are held or in any way restrained. It is astonishing what energy and persistency such patients often show in attempting to carry out their morbid impulses. The objective symptoms also have changed to

some extent in the second week. The cheeks are now more brownish red or blue, the eyelids are half closed, there is dried mucus at the corners, and the nostrils are smoky looking. A brown, tough coating clings to the teeth and gums, and the tongue is covered with a brown crust, which gradually becomes blackish. Decomposition of the coating of tongue and teeth causes a very disagreeable penetrating odor, movement of the tongue is much impaired, so that speech becomes indistinct, chewing of hard substances often impossible and even drinking difficult.

In the third week of typhoid fever the patient becomes excessively weak; he cannot sit up, and if the bed be inclined he slides down towards the foot as often as he is lifted up. The somnolence and stupor reach the highest point, the noisy delirium ceases, and the restlessness gives place to increasing stupor; some patients make automatic motions with the hands, pull at the bed clothes and almost always pass the faeces and urine in bed.

Fatal termination is most common in the third week, if not induced by some peculiar accident, death results from the water swelling of the lungs, after the prostration, weakness, temperature and pulse have reached the highest grade. In favorable cases there is a subsidence of the symptoms about the middle of the third week. The state of deep sleep, from which the patient could only be aroused with difficulty, and during which he lived a dream life, gives place to natural sleep, While awake the expression of the patient shows that he pays some attention to the things about him, which at the height of the disease had no charm or existence for him. The first glance in which affection and gratitude again appear may be regarded as an advance, although the danger is not yet over, and the hopes awakened by this and other hopes are often blasted. The more quiet and continued the sleep, the clearer the intellect usually is during the waking state. They no longer pass the urine and faeces in bed, but call for the bed pan when they wish to have a stool or empty their bladder. The looks of the patient improve from now on and the tongue looses some of its coating. Towards the end of the third or commencement of the fourth week convalescence commences, but recovery is very slow, owing to the existence of ulcers in the intestines. The appetite, which often becomes wolfish during convalescence, may prove fatal, if the nurse is careless or the patient intractable.

Recovery is the most frequent termination of typhoid fever. It takes place in about three-fourths of all cases.

Treatment. It is believed to be needless to say that a physician should be called to take the patient in hand and direct what medicines are needed. The learned practitioner, from the indications in most cases of typhoid fever, will find means to protect the patient from all injurious influences combat dangerous symptoms, counteract complications and will give directions to maintain the strength of the patient by means of a specially prescribed diet.

The work of the physician can be made much more easy if the following rules are strictly observed, and his success depends greatly on the co-labor of the nurse and the place where the sufferer passes his ordeal.

If circumstances permit you should see that the sick room is not too small and to have it well ventilated. Fresh, pure air is very necessary to all typhoid patients, and they do not catch cold so readily as one imagines. The temperature of the room should be regulated by the thermometer and should be kept as nearly as possible between 60 ° and 65 °. Place a pan of water under the bed. It is useful in maintaining a uniform degree of moisture in the room and prevents bed sores. The bed of the patient should be carefully attended to. The coverings should not be too heavy, and the sheet should have no creases in it. The bed and body linen should be changed as often as soiled. You must also see to it that the body of the patient is kept scrupulously clean, not only face, neck and hands, but also all other parts. Even the neatest persons sometimes are neglectful in this matter, either from prejudice or fear of injury from exposure and fail carefully to inspect the parts about the anus and genitals. These parts should be carefully cleansed from any adherent excretions. Neglect of this precaution frequently cannot be subsequently made good. If the patient is too weak to clean his own mouth, it should be done for him, using a linen rag and pure cold water. Particular attention should be paid to washing off the sticky mucus clinging to the teeth and gums before it dries and decomposes. Even when the patient is in a state of stupor, he usually shows some signs of pleasure and gratitude after this proceeding. The best drink is pure cold water. All additions of fruit juices, vegetable acids, sugar, toasted bread, etc., etc., soon become objectionable to the patient. The patient must drink freely in order to replace the loss of water induced by the copious perspiration. If, during the advanced stage of typhoid they do not ask for drink because they do not perceive the want of it, it should be offered to them quite often. The diet should

be one of milk, raw beaten eggs, (about one a day) beef tea, and thin oat meal or barley gruel, properly strained. The longer the disease continues, and the greater the exhaustion of the patient the more untiringly must the attempt be made to supply nourishing food, but always in very small quantities and in liquid form. In addition to these rules of diet, you should wash your patient all over the body with pure cold water or with a mixture of three parts of water and one of vinegar. This should be repeated several times daily, and should be done very carefully with the softest kind of a sponge, so that the beneficial and soothing effect may not be annulled by the fatigue induced by the act itself. In a mild, regular course of typhoid fever no medicine need be given, but should any complicative symptoms arise, which cannot be forestalled, the physician in charge will supply the necessary remedies. If the fever rises and assumes dangerous symptoms, and the physician is not around at the time, do not wait for his arrival but administer at once of quinae 2 gr., bottle No. 16, one pill every hour.

During convalescence the diet of the patient should be most carefully watched. The number who die during convalescence from fault of the physician because he has neglected to say exactly what, and how much, the patient must eat, or from their own neglect because they have not followed the rules laid down for them, is proportionately large. It is best to let the patient eat frequently, but only a little food at a time, so that the slight amount of gastric juice secreted by the convalescent may suffice for its complete digestion. All indigestible food, which forms a large amount of faeces should not be used. An apparent insignificant digestion, a moderate diarrhoea or slight vomiting, should be regarded as a dangerous occurrence, because it may induce perforation of an ulcer that has not yet healed.

Until the time when the patient is completely well, liquid food should be the rule; nothing is gained by haste or by cramming the patient with all sorts of things. It is only too often the cause of death. Milk, raw beaten eggs, raw oysters, beef tea, strained gruel of oatmeal, barley and wheat, tapioca boiled to a jelly, small pieces of dry toast. Tender pieces of steaks and chops can be chewed and the fibres spit out. Rice well boiled in water and seasoned with sugar and fresh milk, and articles of this class are proper food if taken in very small quantities at short intervals of say one to two hours.

The sick chamber should be thoroughly disinfected by taking a

piece of wet cloth and dropping a small quantity of carbolic acid, bottle No. 5, on same and then hang it in the room free on all sides.

The patient should be isolated and not be bothered by any one save his nurse.

During convalescence he must not suffer any mental or bodily excitement of whatever nature. His mind must be free and have a chance to rest from the terrible strain it has undergone.

Typhoid fever patients take usually a very long time until they are completely recovered, and no man can be considered fit for work for three or four months after a severe attack of typhoid fever. It is the case only too often that patients consider themselves completely restored, then over tax their strength and succumb after all.

Diphtheria or Diptheritis is a very dangerous, contagious disease, in which the air passages and especially the throat, becomes coated with a false membrane, produced by the solidification of an inflammatory exudation. The contagion is contained in the false membrane and shreds of tissue detached from the diseased parts and also in the air breathed out by the patient. Physicians and nurses are in great danger of being infected by the morbid product coughed out by the patient when they are painting and cauterizing his throat, or opening the windpipe in very severe cases.

Science and humanity have to mourn the loss of a number of excellent physicians and brave nurses who fell victims to diphtheria while in the line of duty. The numerous cases of infection of persons who have been in the same room with diphtheriatic patients without the disease coming in their immediate vicinity, proves that the air exhaled by the patient, which does not contain shreds of tissue, is a vehicle for the contagion. Children are more subjected to it than adults, however, the latter are by no means free from contracting the disease.

Symptoms. The disease almost always begins with apparently insignificant and harmless symptoms. In most cases the general health is disturbed a few days before the disease breaks out; the appetite is less; the patient complains of dullness, depression and chilliness. At the same time the patient complains of difficulty in swallowing, but in most cases this is no greater than it usually is in simple catarrh of the throat. If the fauces (in vicinity of the root of the tongue) are not yet covered with false membrane, but only somewhat reddened and swollen at this stage, diphtheria can only be suspected or recognized when it is known to be epidemic or that persons about the patient have, or

have had, the disease. Not unfrequently the persons about the patient have their attention first called to the disease by swelling of the tonsils, the complaint of slight difficulty in swallowing having passed unnoticed. It is usually not recognized as diphtheria by other people than physicians, until the whitish gray spots or patches in the fauces are noticed. When this sure sign is visible you need have no doubt whatever that you have to deal with a very dangerous and malicious foe. Even if the disease begins mild with hardly any symptoms and the grey patches are only small and far between, it is no guarantee that the disease will terminate favorably.

If the disease has begun violently; if a chill and repeated vomiting have been the first symptoms, the subsequent course of the disease is also usually more severe. The difficulty of swallowing generally remains moderate and the fever does not become very high, but the patient grows pale, the eyes become dull, the pulse small and usually frequent, rarely retarded; the patients are very sluggish and apathetic. In many cases the putrefaction of the false membrane causes a penetrating foul breath. The swelling of the glands of the neck becomes more marked; the enlarged glands are very hard and resistant, but have no tendency to suppurate. Even after a few days death may occur from general paralysis, while the intellect remains clear. Some patients whose state had not excited any anxiety and whose general condition was previously satisfactory, die unexpectedly with the symptoms of general collapse without our being able to find any explanation for the occurrence.

However the most malignant forms of diphtheria do not always prove fatal and many pull through and as soon as the ulcers in the back part of the mouth heal up, the glandular enlargements subside, the depression of the patient disappears and perfect convalescence follows in two or three weeks, but is usually a long time, before the patient recovers entirely.

The disease as above described is greatly modified when the diphtheriatic inflammation extends to the larynx and windpipe. Then the symptoms are complicated with hoarseness, loss of voice, excessive swelling and symptoms similar to croup. This complication occurs in the mild as well as in the severe cases. Even such cases may end in ultimate recovery, but most of the patients die, some with the symptoms of collapse; some with those of insufficient respiration (suffocation) and poisoning of the blood.

Even when the disease ends in recovery it is often followed by paralysis. Some become speechless, others have great trouble in swallowing, while in some cases the extremities have become entirely paralyzed. If any of the poison gets into the eyes it may cause blindness.

Treatment. All persons coming in contact with diphtheriatic patients should wear a guard over their mouth and nostrils and thus protect themselves from contact with the false membrane and shreds of tissue coughed up by the patient. One of these guards is best made of cotton flannel in the shape of an apron about 6 inches wide and $3\frac{1}{2}$ inches long, tied behind the head by means of strings. This cloth should be moistened with water and sprinkled with carbolic acid, c. p., bottle No. 5. When circumstances permit those who have nothing to do with the care of the patient should keep out of the sick room.

As soon as the false membrane has formed, it should be removed by a physician or surgeon, who will also apply such palliatives as may be necessary. The majority of physicians will agree, that in very severe attacks, the most prized remedies are useless. After the surgeon has removed the false membrane, the patient may slowly swallow small pieces of ice and gargle with a solution of chlorate of potash, Bottle No. 7, one teaspoonful to a glass of cold water. If a cure can be effected, your family physician will provide the necessary remedies, but be prepared, whatever hope the good man may hold out to you, the poor little sufferer may be called to his creator, before you imagine or can comprehend that you are at once childless. The disease is one of the most treacherous in existence and calls for many victims.

It would be impossible to generalize the numerous complications and phases arising in diphtheria, and only a trained professional man, a physician, can battle with them, and to whom you should leave the management of the patient, following his directions at all events. Do not wait too long before you call him, you would grieve and be troubled with everlasting sorrow, to be informed by him, when he does arise, that it is too late and that your child is beyond the stage, where human skill cannot interfere with the course of this malignant disease.

Malarial Fever—Intermittent Fever—Chills Fever. This fever results from infection of the body with a poisonous substance, called malaria or miasm. Malarial fevers are endemic chiefly in marshy or

swampy regions, and in such places the number of persons affected increases or decreases according as circumstances favor or do not favor the decomposition of dead vegetable matter in the marshes. If it grows very cold so that the swamps freeze up, the intermittent fever ceases. The same thing occurs when in dry seasons, the marshes entirely dry up, or if, in very wet seasons, a thick layer of water protects the mouldering bottom of the marsh from the action of the sun and air. On the other hand, in swampy regions, hot seasons, is not too dry, so that the sun's rays can act freely on the exposed but still moist bottom of the swamp, are characterized by the great prevalence of intermittent fever.

There are extensive sections of country, where the circumstances for the formation of malaria exist everywhere, in all parts of which intermittent fever accurs; but there are also small circumscribed malarial areas, where numerous cases of intermittent fever are seen every spring and summer, while the whole surrounding country remains free. Every age, both sexes, and all constitutions, have a predisposition to intermittent fever and it occurs in all climes, that are not very dry, except in the frigid zones.

Symptoms. It usually takes ten to fourteen days after exposure to miasm, that the real malarial symptoms make their appearance. An attack of intermittent fever consists of three stages; *Chill, Fever and Sweating.* The chill begins with a fit of weakness and great faintness, the patients gape and stretch their limbs. These symptoms are soon accompanied by a subjective sensation of cold, at first consisting of cold shivering over the skin; afterwards of continued chilliness so that the patient wants to wrap up as warmly as possible. When the chill increases, the limbs tremble involuntarily, the lips quiver, the teeth chatter, and the whole body is often shaken around in bed. When the chill begins there is also more or less headache, oppression of the chest, and hurried respiration; the latter and the quivering of the lips, render speech indistinct and interrupted; there is also often vomiting if the chill comes on after eating. The patient during the chill has the appearance as if he had been exposed to severe cold. The size of the body appears diminished, the face sunken, the nose pointed, the rings are too large for the fingers. The cold stage lasts from half an hour to three hours. In the first attack it is usually shorter and less severe than in subsequent ones and its intensity and duration generally decrease again if the disease lasts for a long time.

The hot stage does not begin suddenly but gradually; at first the chill is only interrupted by temporary flashes of heat and a permanent feeling of warmth comes on by degrees. The headache becomes more severe, the patient grows restless, and not unfrequently delirious and somewhat stupid. The feeling of oppression on the chest increases, while the breathing almost always becomes deeper, fewer and slower. Thirst is greatly increased, the appearance of the patient increases, the color returns to the skin, the pail, livid look, the loose flesh, the blueish hue of the lips and finger ends disappear, the face becomes flushed, the previously small pulse grows strong and the enlargement of the spleen increases. In the hot stage the bodily temperature is increased and at the actual commencement of this stage the temperature of the blood reaches the highest point and remains there till towards its termination, when it gradually begins to fall. All these symptoms show that the spasms of the muscles have disappeared. The duration of the hot stage varies; sometimes it is only a few hours. In severe cases the dry heat continues six, eight and even twelve hours before a pleasant perspiration breaks out on the skin.

The sweating stage begins with moisture in the arm pits and on the forehead; but soon the perspiration, at first moderate, but later very copious extends all over the body. The patient feels greatly relieved, the headache remits and gradually disappears, the mind becomes clear, the oppression passes off, respiration becomes normal, the thirst is less annoying, the pulse is soft, full and less frequent. During the sweating stage the bodily temperature gradually falls and towards its end becomes nearly normal. When the attack is over and the intermission most patients fall into a deep sleep, from which they awake much fatigued and dull, but feeling otherwise pretty well.

According to the rhythm in which the attacks follow each other, the malarial or intermittent fever is distinguished as re-occurring daily or nearly every twenty-four hours. Every other day, where the intermission is forty-eight hours, and in some cases the intermission is three days. The most frequent are the daily and every other day occurrences.

Treatment. In order to prevent this extremely disagreeable disease, that the injurious influences which notoriously favor the development of the disease, should be as much as possible avoided. Moreover, persons obliged to reside temporarily or permanently in malarial regions, should observe certain rules, which afford more protection than preventative medicines. They are as follows:

Eat much pepper, drink plenty of lemonade and strong black coffee, avoid eating at night, drink only water which has previously been boiled, wear clothing suitable for the time and temperature, protect your body by warm under clothing against the morning dew and cool evening air, and keep the windows closed at night, live in a dwelling, situated high and dry, above the marshes, avoid getting wet, errors in diet and other excesses favor the bringing on of the disease. avoid as much as possible green vegetables, milk, and bathing in rivers, especially after sundown. Sleeping in the open air seems to be most dangerous.

As soon as the first symptoms of the chill is observed, the patient should go to bed, but do not allow the piling on, of too many bed clothes, as they do not warm the skin and only interfere with the circulation in the skin and impede respiration. If the chill be very severe, the skin may be rubbed with a warm woolen cloth, and warm woolen cloths, and warm bottles placed in bed. Hot drinks neither relieve the chilliness nor increase the temperature. If the patient however insists on drink during chill a very moderate quantity of hot er, without milk or sugar is not harmful. If the patient becomes collapsed during chill, give strong black coffee and rub patient with hot woolen cloth. In the hot stage, relieve him of some of the covering and give plenty of cold drink in small quantities. If there is much rush of blood to the brain, use cold compresses on forehead. The sweating period must be awaited in bed. On day after the chill, the patient should take one or two Pills Cathartic Comp. Vegetable, bottle No. 17, and after he has had a good evacuations of the bowels, should be very careful as to his diet, avoiding all fats, milk and butter, and only partake of the lightest of food in very small quantities. One large dose of Quinia, bottle No. 16, should then be administered, giving an adult five two-grain pills, a person in his teens, two pills and a child under ten, one pill. Children should not be given any Comp. Cathartic pills in this disease, but a simple injection of lukewarm water to which a dash of vinegar has been added.

If the chill recurs mark the time and in future omit the cathartic, but give two hours before chill comes on, the same dose of quinia. This will usually break the chill and the patient will not be bothered again, provided he lives up to the rules laid down in this chapter.

Should, however, the malarial fever become chronic in a patient, write to the publishers of this work and proper remedies to effectually cure the chronic form will be provided at cost price.

Asiatic cholera is exclusively a contagious disease, brought on by germs mostly from Asia. Certain influences appear to increase the predisposition, when the disease is epidemic, to the severer form of the disease, or to diminish the resisting power of the organism to the action of the poison. Chief among these are errors in diet, emetics and laxatives, catching cold and other debilitating influences.

The cholera germ can only be propagated if the system is susceptible, which is especially the case when one is afflicted with gastric or intestinal catarrh. In epidemics the general fear of contracting this fearful disease is already sufficient to cause disturbances in the nervous and digestive system to produce this catarrh. In such cases the diseased mucous membrane; the badly digested nutriment in the stomach and intestines prepare the seeding ground for the germ and they multiply with indescribable rapidity.

A person possessing a perfectly healthy digestive apparatus, which can perform its every day functions, need not fear the cholera. Such a person is nearly impregnable.

Symptoms. The first signs, which already need medical aid, are severe diarrhoea of a yellow, bad smelling mass, weakness, puffed up abdomen, pain, anxiety, dizziness. The diarrhoea then becomes watery, vomiting ensues, cramps in belly, and in the calves of the legs. The patient loses strength very rapidly. The evacuations of the bowels now become odorless, but contain the poisonous contagion. The skin becomes ice cold, if the skin is pulled, the folds remain, and they and the fingernails assume a dirty blue color. The countenance is deadlike, and shows much anxiety; the eyes become glassy; the voice hoarse; the internal heat of the patient is nearly unendurable and is unable to quench his thirst. Urinating stops entirely. The patient remains conscious during this attack and his mental and physical suffering is intense.

If death does not occur during the height of this stage. Convalescence ensues sooner or later. First the cramps in legs, then in the abdomen let up and gradually disappear, respiration becomes free pulse rises, the color of the skin becomes natural again and warmth of body returns. a warm perspiration breaks out all over the body, and the patient falls into a tranquil sleep from which he awakens, much refreshed. The first after this, he has intense desire to urinate and upon evacuating his bladder, the road to recovery has not many obstacles. The patient during convalescence must be

tremely careful, else a relapse might ensue in the chape of cholera, from which he may die.

Cholera terminates fatally in a great many cases, three, six or twelve hours after first symptoms become apparent, death often ensues. It is seldom that an attack is not definitely decided, one way or the other within two days.

Treatment. Since there is more danger in a place, where cholera is prevalent, and still more in a house where it has broken out, than in other places, it is sensible for persons, who can make a long journey, without great inconveniences, to fly from the disease. Such persons should be sure to start on their journey soon enough; to go off as far as possible, and not to return till the last trace of the disease has disappeared. If you must stay at home, do not use any strange privy or one of your own, if you suspect that it has been used by a person liable to be affected already. Disinfecting privies does some good, but not sufficiently to rely on its non-contagious influence. People in cholera infected districts should be particular and careful about their diet, avoiding all food, known to them, to be hard to digest, or having a tendency to loosen their bowels. Complete and sudden change of life is not advisable and while the extreme moderate use of red wines is not harmful, all other excesses in the shape of stimulants should be shunned. As soon as a patient is affected with diarrhoea, he should send for a physician, and remain in bed till the physician arrives, drinking in the meantime a few cups of hot black coffee, made very strong, and also take some essence of Peppermint, Bottle No. 27, in teaspoonful doses in hot water. It is a well known fact that energetic sweating occasionally averts an attack of cholera. At least in every cholera epidemic, we see persons that have been attacked by copious diarrhoea, great debility, cramps in the legs, and even vomiting, and who, on account of these symptoms, have drunk large quantities of hot coffee, to which a liberal dose of brandy had been added, buried in the bed clothes, and reeking with perspiration, while the passages which were often discolored and beginning to resemble rice, water discharges and the vomiting also have ceased. Experience also teaches that in such cases, if the sweating is stopped too soon, a true cholera attack not infrequently comes on, and that it is well not to let a cholera patient leave his bed till he has had a formed stool. We advise every one as soon as cholera becomes epidemic to purchase from any trustworthy druggist the following mixture:

R. Tinct. Valer. Aeth., two drachm.
 Vin. ipecac., one drachm.
 Tinct. opii., one scruple.
 Ol. menth. pip., five drops.

M. S. Twenty to twenty-five drops every hour or two. Children over 12, fifteen drops, under that age five to eight drops. These are the celebrated Russian cholera drops, and have saved many a life. Use them as directed as soon as diarrhoea or any of the other symptoms make their appearance, even before the physician arrives.

Large quantities of warm drinks, are usually vomitted at once, during the height of the attack. When the patient suffers with torturing thirst allow him all the cold water, which had been previously boiled, he wishes. It will do no special harm. As soon as the pulse grows small and the patients are in an evident collapse, stimulants should be given from time to time, to prevent the paralysis of the heart. Rum or brandy diluted with half water is best for this purpose. Frictions of the skin with oil of mustard, Bottle No. 12, relieves the painful cramps in the muscles. Of course, nourishment cannot be given to cholera patients during the attack; but even after the attack is over and reaction has begun, you must be very careful about the food, and in order to protect the diseased intestines from injury, nothing should be given, than diluted milk, meat broth without a vestige of fat and dipped toast. Solid food must not be given till pulpy and consistent stools appear. Infringement on this rule is generally severely punished.

Dysentery—Bloody Flux. It is a disease attended with inflammation and ulceration of the large intestine, and characterized by griping pain in the abdomen, constant desire to evacuate the bowels and the discharge of mucus and blood. When epidemic, it is contagious through the excrements. The germ, which originates the disease, flourishes outside of the human body and persons staying near its locality are in danger of being attacked by it. The circumstances favorable to the propagation of dysentery person are moist high temperature. It attacks in the open country oftener than the cities. Catching cold, getting wet, great fatigue, the use of unripe fruit or vegetables are causes of dysentery, in so far, that the injurious influences resulting therefrom, increase the predisposition to the disease.

Symptoms. Dysentery begins with an apparently innocent diarrhoea, during which the faeces passed are not suspiciously looking, preceded by moderate colicky pains and accompanied by a feeling or desire to evacuate the bowels without the possibility of accomplishing the same.

This latter described feeling, called tenesmus, becomes very distressing and the cause of very much pain. When the evacuations occur, they are accompanied by a very torturing and painful bearing down of the rectum, to which is often added a painful discharge of urine. Immediately after an evacuation the patient feels relieved, and usually has pain only on hard pressure against the abdomen, especially in the region of the colon; but soon, even after a few minutes the tormentation begins again, the patient writhes and groans, and, when the pains have attained the highest grade, tenesmus recommences, and again a small quantity of dysentery dejections of a sickening odor is passed. Sometimes this scene is repeated twenty or thirty times in twenty-four hours. There is always more or less fever. Convalescence is very slow.

If the disease passes from the acute to the chronic form, as is very often the case, the fever disappears and the intestines become ulcerated. Diarrhoea generally alternates with constipation, occasional normal faeces, with bloody masses clinging to them, at other times a fluid from the ulcerating mucous membrane is evacuated. The patients become very much emaciated, and after languishing for months usually die of dropsy. Should, however, the intestines heal, dysentery is followed by stricture of the intestine. For the rest of his life, the patient suffers from habitual constipation and the various inconveniences incident thereto.

Treatment. Avoid the causes of this disease and thus prevent its occurrence, especially do not use a privy, which has been used by persons afflicted with the malady.

In milder cases of dysentery it is well to begin the treatment with medium doses of castor oil and apply very warm poultices of corn or linseed meal to the abdomen, keeping it up till the pains are relieved. Even in the mildest grades of dysentery, the patient should keep carefully in bed, and eat nothing solid, but live on soup diet. If the patient be strong and full blooded, watersoups of toast or parched flour will do, but if he be weak and poor in blood, you must attend to keeping up his strength from the beginning and give concentrated meat broth, raw eggs, farina, and other soups of like character. In aggravated cases, keep up the practice of giving castor oil in tablespoonful doses every four hours, and give injections made as follows: Take common cornstarch, one tablespoonful, and add to it one cup cold water and stir well, have the substance in a large bowl and add

to it about one-half pint boiling water, stirring constantly, when luke warm yet inject by means of syringe into rectum, the whole quantity should be used at one time. If the pain is very intense, to this emulsion 10 drops laudanum may be added. This injection should be made every 3 to 4 hours, unless sooner relieved, and patient should be advised to keep the mass in his rectum as long as possible before evacuating same.

Trichinae Disease or *Trichinosis*, is exclusively caused by eating raw or only partially cooked pork, by means of which the trichinae are transferred to the human body, first of course, to the intestine and from there to the muscles. Not all pork contain trichinae, but presumably from those hogs, which have been feasting on dead or live rats. It is a well known fact that rats not only frequently have trichinae, but that they often die from the effects of them. How they get into the rats is not known.

As prevention is better than a cure, take the advice and abstain from raw pork in any shape, or even that which has only been partially boiled, baked, wasted or broiled. If pork is well and thoroughly cooked, the trichinae is destroyed. Pork under all circumstances should be extremely well done.

Syphilis appears in various forms.

1. Chaucer, belongs to the class of purely contagious diseases, and no one contracts it, who has not been infected with the virus of the opposite sex.

2. Glandular chaucer or bubo belongs to the secondary stages of syphilis and is the neglected product of the first.

3. Constitutional syphilis, is when the disease in its primary stage has been so neglected as to poison the whole system.

Hereditary Syphilis, is that form of the malady occurring in newly born children, and originating in the embryo, from constitutional disease existing in the father at the time of begetting the child, or in the mother during pregnancy. If a woman, who has secondary syphilis becomes pregnant, the foetus nearly always dies premature and is expelled by a miscarriage.

Inasmuch as this disease should never occur in a family, for which this work is intended, it is believed to be out of place to give room in it for its discussion. However, it is hoped, that fathers and mothers should make careful inquiries before they consent to the marriage of their daughters, whether their future son-in-law is or has been afflicted

with this loathsome disease. It would be well for themselves and also for the happiness of their child to refuse consent to a union, with a man, who is, or has been recently troubled with this nasty malady. Should, however, any man or woman have contracted syphilis, they should not wait till it becomes secondary or even tertiary in its nature, before consulting their regular family physician with a view to undergo a radical cure. If the disease is allowed to run along and is not checked in proper time, it is next too impossible to entirely eradicate it from the system.

Hydrophobia—*Rabies*, is a disease resulting from the bite of a mad or rabid dog, or from its licking a wounded portion of the skin. Bites of rabid animals upon bare portions of the body are far more dangerous, than if the part bitten be covered by the clothing; as in the latter case, the poisonous saliva is not so readily conveyed to the wound.

Symptoms. The shortest term of incubation appears to be about eight or ten days, the longest twelve to thirteen months. In the majority of instances, the malady breaks out in about forty days after the reception of the bite.

The first stage of the disease is marked by a peculiar depression of the patient's spirit, amounting to an acute melancholia. The patient seeks solitude, is timid and apprehensive, and either sits motionless and plunged in deep abstraction, or else is unable to rest at all. Sleep is restless and broken by frightful dreams. The spasmodic breathing is the first token of the tonic spasm of the muscles of inspiration which causes such frightful torments in the second stage of the disease. The first stage having lasted two or three days, the second or furious stage begins. Its onset is marked by a fit of choking, suddenly induced by an attempt to drink, which renders the patient incapable to swallow a drop. The dread of water is entirely due to the dreadful experience of the patient on trying to drink. Exhibition of water or even of drinking vessels, usually throws the patient into convulsions.

These symptoms are soon accompanied by attacks of boundless rage, in which the patients are hard to manage, destroy all that comes in their way, strike, kick, scratch, and bite, if held fast, and not unfrequently kill themselves if not held fast. Very often, between fits, which usually do not last longer than one-quarter to half an hour, the patient warns his attendant, and asks pardon for his misbehavior, and sets his worldly affairs in order, in perfect consciousness of the near

approach of his end. The fits of madness and convulsions, having steadily grown more frequent for two or three days, begin to diminish in violence and duration, as the patient loses strength. The exhaustion and collapse usually augment from hour to hour, the voice grows hoarse and feeble, and death relieves the sufferer.

Treatment. The only prevention is by confinement of dogs. No attention should be paid to the lovers of dogs. Any one, who expends sympathy on the "poor dog," and petitions against his being tied up or muzzled, should be made to watch a patient with hydrophobia for half an hour, and he would soon be cured. Many of the muzzles that are placed upon dogs do not prevent their biting, and they are only protective when they do so.

Unless the inoculation after the Pasteur method is resorted to as soon as possible, little hope can be extended to the unfortunate, who has been bitten by a rabid dog.

If the disease has broken out there is no hope of curing it, or even of alleviating the sufferings of the patient. No observation is on record of any well authenticated case of hydrophobia, which has terminated otherwise than a very painful death.

Even the waiting upon and nursing of the patient are very difficult, and should only be trusted to persons who are humane as well as fearless and energetic. Every thing that can produce fits of madness, such as the exhibition of water should be strictly avoided.

The physician in charge of the case will always find some means to shorten the fits and perhaps incident to it the terrible suffering of the patient.

Chlorosis or green sickness. This is one of the most common of disorders in females between the ages of fourteen and twenty-four, and is doubtless ascribable to the effect of those processes which are going on in the bodies of young girls at the period of puberty. The development of this affection is encouraged by want of fresh air and exercise by improper nourishment, mental excitement, improper reading, masturbation, or by a general unhealthy mode of life. Obstinate chlorosis attacks all young girls without exception in whom the menses have appeared in the twelfth or thirteenth year, and before the development of the breast.

In pronounced chlorosis, the disease of the red blood corpuscles is very prominent, and the proportion of corpuscles greatly diminished.

Symptoms. The most striking symptom of chlorosis, consists in the palor of the skin and visible mucous membrane. In blondes the surface is of a pure white, and in dark haired persons it is more of a dirty grey or yellowish hue. The palor is often most distinctly pronounced upon the ears, while in the mucous membranes the loss of color is most pronounced in the lips and gums. The reason for this blanching of the complexion is manifest. The number of red corpuscles upon the blood itself depends for its redness and the tissues through which it circulates for their tints is reduced one-half, one-third or even lower.

Chlorosis is always accompanied by more or less shortness of breath owing to a diminuation in the number of corpuseles, which in their function take up oxygen and carry off carbonic acid. The normal number of respiratory acts is insufficient to supply oxygen to the lungs in quantity adequate to the wants of the system. It is for this reason that patients with chlorosis scarcely ever fail to complain that they get out of breath when they walk fast or mount the stairs. The strength of the muscles, which to be vigorous calls for a supply of well oxygenated blood, is greatly reduced. The patient is easily fatigued and complains of a sense of weight in the limbs. There are usually signs of hysteria in persons afflicted with chlorosis, also a troubled, irritable temper, disposition to weep and a perverted appetite.

The patient usually always complain of palpitation of the heart, besides which other serious disorders of the digestive system arise in chlorosis, which must be carefully looked after. The appetite is nearly always diminished, and after eating there is a sense of fullness and pressure in the stomach with sour eructations and symptoms of dyspepsia. These troubles are not dangerous at all if properly looked after. The urine of the patient is nearly water white. There is also more or less trouble about the sexual organs, about the time of menstruation, and it is not unfrequent that the menses are from a week to ten days late. In some girls the disease is aggravated by catarrh of the womb and vagina.

The course of chlorosis, unless cut short by proper medicine, is always slow and tedious, but usually terminates in complete recover, although in many young persons one or two relapses may occur.

Treatment. As soon as the fact has been well established that a young girl is afflicted with chlorosis, administer to her after each

meal three times a day, two of Bland's Feruginous pills, bottle No. 18, and if the pills are well borne on the stomach, which they usually are, increase after first week the dose to three pills three times a day. This remedy is a specific and while slow is a sure cure.

Of course the diet of the patient must be looked after, and good healthy food should be the rule; avoid pies and pastry as much as possible. If constipated administer an injection of lukewarm water.

Chlorotic patients are languid, indisposed to exertion, and void of appetite. This is the nature of the disease. Do not force them to exercise or walk, but make them promise that they will do so as soon as their strength is sufficiently established. As soon as the medicine prescribed shows its restorative power the desire to get out of doors will show itself and with it returns the lost appetite.

Relapses cannot be averted, especially when it sets in first at commencement of puberty, but is easily cured by resorting again to the above mentioned medicine.

Under no circumstances allow your patient too much acid, such as vinegar in food and also be sparing with fresh fruit.

Scrofula. The name of this disease signifies a morbid condition of of the system, manifested by a remarkable liability to certain forms of disorders of the skin, mucous membranes, joints, bones, organs of special sense, and above all, the lymphathatic glands. A person having merely a tendency to such disease is what is usually termed scrofulous.

It is of rare occurrence that this disease is acquired after birth. Its main origin is of a complicated nature. It is particularly from offspring of scrofulous parents, and of such it is common that all their children inherit the trouble. Parents who are consumptive at time of begetting the child, either collective or single, or if either one of them suffer at the time of copulation from cancer, syphilis, or of parents beyond a certain age, are well-known causes to incubate into their offspring this disease. It is also well known that many of the mental and bodily traits of parents are transmitted to their progeny, it will not seem extraordinary that children of feeble, sickly fathers and mothers should have a greater tendency to disease than those whose progenitors are vigorous and healthy; but science is totally unable to account for the fact that scrofula is very prevalent in the children of parents who are too closely related to one another by blood.

Acquired scrofula generally arises as a result of pernicious influences, which have impeded the healthy development of the system during the first years of life. First of all among these stands improper nourishment, a course diet, containing but little nutriment in comparison with its bulk, being very properly held in especially evil repute. The earlier this injudicious feeding of an infant commences, so much the greater is the danger that it will become scrofulous, hence the children fed on pap furnish a very important contingent to the army of scrofulous persons. Want of fresh air and exercise exerts an influence as baneful as that of improper food.

Symptoms. The so-called scrofulous habit is marked by a deficiency of blood and by a bad nutritive state of more important tissues, and sometimes accumulation of fat in certain regions, especially in the upper lips and nose.

Scrofula, although principally a disease of childhood, rarely declares itself in the first years of infancy, exerts through a few faint tokens. At the time of puberty scrofulous diseases usually subside and with them the scrofulous habit more or less completely disappears. However children having it in the system, and it does not come out during childhood, are usually attacked by it later in life. Skin and scalp eruptions, the former mostly on the face, are the commonest forms. The destructive affections of the skin, however, come usually later in life.

Scrofulous inflammation of the mucous membrane is most apt to appear in the vicinity of the natural orifice of the body, when it then readily implicates the neighboring skin.

Scrofula exerts its debilitating influences all over the body, and among the organs of special sense. The eyes, and more particularly the lids and tear glands are affected by obstinate inflammation. In the ear, besides the inflammation of the external auditory canal it inflicts damages to the bones of the ears and causes difficulty in hearing and even deafness.

The progress of scrofula is tedious and treacherous and nearly always is marked by periodical alternations of improvement and aggravation. Either the same symptoms re-occur again with renewed severity or else the former set having abated, or subsided new ones arise. Complete recovery from scrofula is a very common occurrence.

Death rarely results from the disease itself, but many children die of croup, water head, colic and other diseases of childhood, having

through the debilitating tendencies of scrofula, a predisposition to contract these maladies.

Scrofula of long standing and which has not received any care whatever, may form into consumption.

Treatment. Prevention against hereditary scrofula lies beyond the sphere of the physician, unless that scrofulous, consumptive, sickly and superannuated persons should not marry at all and that healthy and vigorous persons should not wed their near relatives. Such advice from a friendly physician, however, is usually rewarded by losing a customer. Scrofulous children, in addition to weakness and a puny state, should have plenty of fresh air and muscular exercise, even if they have to be kept from school and allowed to romp around in the open air. They should be given a plain, healthy and easily digestible diet in which animal food predominates. Potatoes, vegetables of a like character and butter should only be allowed in moderation. They should be given a salt brine bath every morning, or at least sponged with strong salt water. In very decided cases give cod liver oil, commencing in teaspoonful doses and gradually increasing.

Children in the first year of life must not be given any pap or other artificial food, but nothing but mother's milk. Should the mother not be able to supply the wants and circumstances permit, employ a healthy wet nurse. After the child is weaned, do not over feed but be regular and commence at an early day with meat broth, beaten eggs and plenty of fresh cows milk.

When scrofulous children get to be about three years old, coffee made of acorns is of the utmost benefit to them, and can be given to them at all meals instead of the regular beverage. Gather in fall the green acorns, dry them in oven, remove the shell, parch the meat of the acorn, same as coffee, grind and prepare, using with it a little sugar and milk. Under the above dietetic treatment scrofulous children around to lasting health in nearly all cases, and the traces of the disease dies out.

The frequent bathing of scrofulous children in cold water cannot be too strongly recommended.

Diabetes or sugar disease occurs about three to one in males and is a rare disease during childhood and old age and often depends upon hereditary predisposition. The exciting causes to this disease are exposure to cold and wet external violence, immoderate eating of

sugar, drinking new wine, unfermented juice of fruit, indulgence in immoderate mental exertion, mental depression, and, above all, intoxication.

Symptoms. The most remarkable symptom of sweet diabetes consists in the evacuation of enormous quantities of urine nearly colorless and of a sweetish taste. It is by no means rare for a diabetic patient in the course of twenty-four hours to pass from five to ten quarts of urine, and in some cases the discharge has been much larger.

Owing to the excessive loss of water through the kidneys the patient experiences an unquenchable and parching thirst, both day and night. Also through this enormous flow of water in one direction, perspiration is completely arrested. An unsatisfiable hunger is a symptom of diabetes; quite as constant as is the unquenchable thirst. It is almost incredible how much food such a patient will consume during a day, often quite regardless of quality.

Men suffering with this disease are always impotent, owing to the general decline of strength. The course of diabetes is always chronic lasting for months and years. A complete and permanent recovery from diabetes is extremely rare. Death, when not the result of some complication, usually takes place with the signs of extreme wasting away of flesh. Towards the end nervous complications usually make their appearance.

Treatment. Numerous remedies and cures have been recommended for diabetes, but, unfortunately, most of them have been devised upon principles based on theories, which are not borne out by facts. Experience has established the fact that if certain rules of diet are observed, the life of a patient can be indefinitely prolonged even if his malady cannot be cured. It is of the utmost importance that the patient should live principally upon animal food, and that they should eat but little of starchy or sacchariae matter. Besides the meat the patient can eat such vegetables as do not contain sugar or starch, or but very little of them. From the following articles it is presumed a variable and acceptable bill of fare can be selected without tiring the patient with too much sameness. All sorts of roasted, boiled or stewed meat dressed with spices, but not with flour, fresh and salt fish, oysters, clams, lobster, eggs in all forms, rich, good cream but no skimmed milk. In the line of vegetables the following may be used: Spanish artichokes, asparagus, green beans, cabbage of all kinds, lettuce, water-cresses and celery. Of fruits strawberries and

peaches. Bread, or anything made of flour, sugar in all its forms and shapes, alcoholic beverages, beets, turnips, potatoes, peas, dried beans, squash and vegetables of like nature must be strictly avoided. If the patient cannot do without bread, allow him at every other meal a small piece of stale graham bread, which has been made without sugar, and in which the bran predominates about three to one. The patient should not be allowed any more liquid than is necessary to slacken his thirst for which spring water is of course the best; there may, however, be made additions to it of a little lemon juice. Coffee, if taken without sugar, can be used.

Diabetic persons are very liable to take cold and show a predisposition to pneumonia, and for this reason should all such patients wear flannel next to the skin and woolen stockings. Of all medicines tried none deviates the patient as much as bi-carbonate of soda, bottle No. 4, and it is advisable to take of it three times a day after each meal, about a quarter teaspoonful of it in a half tablespoonful of water.

Surgery.

WOUNDS.

I N all classes of wounds the main point to observe is the thorough cleansing and disinfecting of the injured place, and to bring the lapses together until granulation sets in. If you succeed in this no fear need be entertained about wound fever or troublesome suppuration.

The form of the wounds being of such wide range it would be impossible to decide how to proceed in the matter, inasmuch as the dissimilarity is too extensive.

Of all the accidents, which cause wounds, *cuts* are the easiest to heal, provided the cut is with the grain of the muscular fibres. *Bruises* are of much difficulty. *Stabs* with a knife or other penetrating weapon, become dangerous, if penetration into the vital organs has been made and are hard to clean and to disinfect. *Gunshot wounds* are perhaps the most difficult wounds to treat, especially so if the ball has taken in its course, fragments of cloth or particles of the lead were loosened, and deposited these foreign substances along the course of the missile. Furthermore, the ball bruises and burns the tissues to some extent along its track.

In wounds where haemorrhages are, it is of the utmost importance to stop these. If the bleeding is not excessive and apparently only from the capillaries the washing with very cold water will usually stop the flow. *Bleeding from the veins* is recognized by the dark color of the blood and by its steady flow and with very little force. By applying a rather tight bandage, such as can be made with a handkerchief or suspender usually stops the flow of venous blood. This bandage should be applied beneath the wound, if below the regions of

the heart and above the wound, when on parts of body lying above the heart. The veins having many interchanging channels, soon finds other passages for the flow of the blood. The bandage should be so applied that it also causes some little pressure upon the wound itself. The pressure of the blood in the veins is not a strong one, but in wounds on neck, where veins are cut, or otherwise opened, it is well to close them as soon as possible, for the reason, that the entrance of air in these blood vessels in this part of the body is very dangerous.

Haemorrhages from the arteries, requires surgical aid, in order to stop the recurrence. An artery of the neck, if cut, will squirt the blood for a distance of ten feet and in the forearm nearly an equal distance.

This shows, with what enormous force the heart pumps the blood to all parts of the body. The blood of the arteries is of a bright red color and can be easily recognized by it, as well as by the force, with which it is propelled.

In accidents where arteries are cut or opened, so that blood is emitted from a wound. the first aim should be to save as much as possible of this life giving fluid. Through this spurting of the blood, the application of temporary bandages is somewhat difficult, and even before it is done, the thumb or index finger, should be pressed against the artery emitting the blood. As soon thereafter, an application of a temporary bandage should be made, with sufficient force, so as to compress the artery emitting the blood. If the wound is in the upper arm, it is also well to make a ball of a handkerchief or other piece of cloth and put it into the armpit, pressing or binding the arm as tight as possible against chest. Same procedure might be followed if the wound is in the leg or foot, bend the knee and place at knee joint a pad, similar to one described for armpit. Thus you will stop the flow of the blood easily and when the surgeon arrives, will properly ligature the ruptured arteries. Wound on head where arteries are damaged, press forcibly against. Haemorrhages on neck and chest are hard to stop. If a small wound, press same with finger, if large one fill the same with linen lint. In cases of all wounds, which bleed profusely, the patient should at once assume a horizontal position. Under no circumstances allow any wine, beer or liquor to the patient. Keep the patient rather warm, except at wound, where, with cold compresses, the temperature can be kept down.

The cleaning and disinfecting of the wound is of the utmost importance. The weapon with which the wound was made, often carries foreign substances to the tissue, which if not promptly removed, will

cause suppuration. Often dust enters the wound, if the same is in the vicinity of the hair, consequently the surrounding of the wound should be clearly shown. For disinfection and washing of wound, take water, which is not too cold, and add to it, say, one teaspoonful Carbolic Acid 10% C. P., Bottle No. 5, to a tumbler full of water, using for its application a very clean and soft sponge or clean linen rag. If the wound overlaps, fit the skin to a nicety, lay over it a nice layer of clean linen saturated with the above described carbolic water, over that some cotton batting. This bandage should, at least, extend 2 inches beyond the wound proper, then tie the whole with a clean cloth or gauze firm, but not too tight, so as to obstruct a free circulation. All wounded persons need perfect rest. Persons wounded in leg, should keep the bed, elevating the wounded member somewhat. Wounded arms should be carried in a sling, suspended from neck.

Wounds of some of the main arteries, should be entirely under control of the surgeon, and you should pay particular attention, how he does it, so that you can do it next time and save expenses. In all sorts of wounds, when you notice that the bandage shows unhealthy matter or dirt, the wound must be cleaned at once and new bandage applied. Further, as soon as the patient complains of heavy pain, shows symptoms of fever, swelling of surrounding, it is only a symptom that the wound is not clean. As soon as you attend to it, these symptoms will vanish. Plasters, salves, ointment and other advertised remedies are of little or no avail and generally make the wound worse, by inducing suppuration.

Frost-bites mostly take place on exposed and thin appendages of the body. Toes, fingers, ears, nose and cheeks. Through cold the affected part first becomes blue and benumbed; and shortly after that entirely insensible to touch. Frost bitten parts should be at once covered with snow or very finely shaved ice, until redness and sensibility returns to skin. Warmth must be strictly avoided, as it would cause a flow of blood to the affected parts in such quantities as to cause inflammation of a serious nature. Prevention against frost-bite is the rubbing of the exposed parts with vaseline, Bottle No. 14, before going out.

Itching often appears on parts of body, which have been frost-bitten. To alleviate and effectively cure this make a solution of *Alum*, Bottle No. 1, and bathe afflicted parts, and allow the moisture

to dry before a stove or open fire. Two or three applications will bring the desired relief.

Burns and scalds. In minor accidents of this kind, apply at once Bi-carbonate of soda, Bottle No. 4, dry, and over it lay a rag, which is saturated with a little vaseline, Bottle No. 4. Wrap the burned or scalded part, and keep quiet. This remedy is infallible and at once deadens the pain. In case clothing has caught fire, throw yourself down and roll around in order to extinguish flame. If bystanders are around let them procure at once a sheet, blanket or quilt, throw patient and cover him in blanket or quilt. Throw water on burned or burning places. Wounds from excessive burns or scalds are dangerous to life. Before you can get the physician, place patient in bath of pretty warm water, you can keep the sufferer for an indefinite length of time. Give very hot coffee or tea in tablespoonful doses to keep up the warmth of the body, which usually sinks rapidly in case of severe burns. The physician will, according to circumstances, apply bandages, after which, if you pay attention to the procedure, you can do it yourself.

Bruises or contusions, are injuries attended with more or less disorganizations of the tissues beneath the skin and of effusion of blood under the same without breaking it.

If the injury is in the muscular part apply hot compresses to the part for fifteen to twenty minutes, after which apply a solution of Arnica, Bottle No. 2, two teaspoonfuls to a cup of warm water, saturate rag and apply continuously till pain and swelling abates.

In injuries about the eyes, arnica should not be used, applying hot water solely and in aggravated cases using a piece of lean raw beef.

If the bruises affect the vital organs, such as lungs, liver, stomach, spleen, etc., or even the fracture of ribs, surgical aid is necessary, as these *internal injuries* are of great danger to life. Till the surgeon arrives, keep the patient as quiet as possible, to avoid internal bleeding, which is more liable to result, when the patient is not kept quiet.

Shocks are sudden depressions of the vital forces of the entire body or a part of it, marking some profound impression produced upon the nervous system, as by severe injury, overpowering emotion or the like.

In cases of severe shocks, the heart's action are hardly perceptible, pulse weak, skin pale, cold and insensible. Consciousness is not entirely absent.

Treatment. Place patient in a recumbent position head down, allow

him to smell on camphor, Bottle No. 8, in severe cases, and when collapse is feared, give the strongest kind of hot coffee without sugar or milk. Wrap patient in warm blankets and put hot bottle, or hot earthen dishpan to his feet. Do not move patient till completely restored. You can also give 15 drops Hoffman's Anodyne, Bottle No. 25, in water.

Sprains, are the effects of straining the muscles, ligaments, tendons, etc., producing swelling, soreness, pain, and disabling the joint for use.

Treatment. Take of Arnica, Bottle No. 2, and dilute with water, using 1 part Arnica to 3 of water, apply to injured part by means of rag saturated in the remedy. Quietness is essential to a cure.

Dislocation of Joints. In order to avoid a stiff joint for life, the resetting of the same should be left to a good surgeon. Till the arrival of the professional man, the afflicted member should be placed in a position, which insures quietness and amelioration of pain; apply cold compresses to the dislocated joint, to check the internal bleeding. After resetting of the joint by the surgeon, the patient must keep entirely from any motion, especially till he is assured that the cartilages have properly healed. After the bandages have been removed, the movements must be very passive at first, increasing in graduation, as the joint gains strength.

Dislocation of the shoulder joint. Nearly fifty per cent. of all dislocations are at this point, when the head of the humerus leaves the socket of the shoulder blade, and lodges under the collar bone. After setting the joint by the surgeon, two weeks' rest are needed before passive movements are permissible. Dislocation at elbow and wrist are often connected with fractures of the bones.

In all dislocations of the joints at upper extremities carry arm in suspensory.

Dislocations of the hip joint happen seldom, it requiring very much strain to effect it. In case it happens, the bed is the proper place and should not even move to urinate or for evacuation of the bowels. The urine bottle and bed pan must be used, to prevent unnecessary movement.

Dislocation of knee and ankle joints are of rare occurrence, they require surgical aid and much rest.

Fractures of bones occur mostly at the extremities and ribs. As soon as a fracture has taken place all movements of the injured parts

must cease. It should be set by a competent surgeon as soon as possible. He will also give directions, according to circumstances, what position to assume. If possible the setting of the fractured bone should take place when the mishap happened, before he is transferred to his home or hospital.

The first thing to do in case of accident, where fracture of the bone is suspected, is the removal of the clothes and especially of the shoe or boot, not by pulling them off, however, but by cutting open the seams. Then place the patient in a comfortable position and apply cold water compresses to keep the swelling down. Do not touch unnecessarily the affected member. When the surgeon arrives, do not act stupidly but assist him all you can by energetic action. In fractures of the leg, the limb is best placed in plaster paris, which will take away nearly all pain. In transporting patients with fractured bones of the leg, a stretcher should be used, which ought to be carried by strong men, if a spring wagon or ambulance cannot be had.

Fractures of bones are dangerous to life, if inflammation sets in, hence the strict obedience to the surgeon's directions are necessary.

In case of accident to legs where fracture has happened, and the surgeon cannot at once attend to the setting and bandage on the spot, and when it becomes a case of necessity to remove patient, as in case of inclement weather, do not do so till you apply a temporary bandage by means of splints and handkerchiefs. Under no circumstances remove the patient till the wounded leg has this support.

MISCELLANEOUS INCONVENIENCES.

Freckles. Apply lemon juice diluted with pure water, three times a day.

Gumboil. Roast a dried fig and apply, keep it there till the boil opens.

Boils and Carbuncles. Poultice with linseed meal till it opens, when all matter has been discharged wash the wound with a solution of carbolic acid C. P., 10%, bottle No. 5, one part acid to four of water.

Itching at Vagina and anus. Wash the parts five or six times in luke warm water and castile soap, dry thoroughly and dissolve one teaspoonful of borax, Bottle No. 3, in one glass water, of solution apply to afflicted parts, with a clean sponge after each washing.

Proud flesh. In minor wounds, which are slow in healing, proud flesh often makes its appearance. Wash thoroughly in luke warm

water and castile soap, dry, and apply rag saturated with carbolic acid 10% C. P., Bottle No. 5.

Swoons and Fainting. Let patient smell at camphor, Bottle No. 8, and in severe cases loosen all clothes, especially the corset and apply hot compresses to chest. Wash head with cold water where pulse has become feeble, administer a tablespoonful of whiskey of brandy. The latter should, however, be only applied in very severe cases where the other remedies prove of no avail.

Reproduction.

PREGNANCY.

THE male and female organs of generation, as well as their secretions have heretofore been described. Human generation is accomplished by the union of the sexes. The female organs produce the ovum or egg, which is conducted into the womb by way of oviducts, where, during copulation it becomes fecundated by means of the semen, injected into it by the male. The female organs producing these ovum or eggs are the ovaries. The male organs giving rise to the semen or spermatic fluid, are the testicles. When an ovum, in the course of nature, has found its way into the womb, and there has come in contact with the semen of the male, and the ovum has thus become fecundated, a woman conceives. From this period her pregnancy dates.

If the ovum remains unfecundated, it is expelled from the womb, including the blood and membranes which had formed there for its propagation. This expulsion from the womb constitutes the monthly bleeding, also called period, menses, or menstruation. Conception in woman is possible as long as these regular periods occur; they cease, however, between the ages of forty-two and fifty years.

All causes of ill health which derange menstruation are also apt to interfere with pregnancy, and women whose menses are regular are more likely to become pregnant after sexual intercourse than those in whom the periods are temporarily absent or irregular.

When pregnancy takes place, however, the menses are suspended during its continuance. They usually remain absent after delivery until the end of lactation, when they re-commence and re-occur at intervals as before.

Sexual intercourse is most liable to be followed by pregnancy when

occurring soon after the menstrual period. Before its discharge, the egg is immature and unfit for impregnation and some days afterward it loses its freshness and vitality. The exact length of time preceding and following the menses, during which impregnation is possible, cannot be ascertained.

Pregnancy is recognized by various symptoms. Absence of menstruation is usually one of the first ones, especially so when the lady is in the enjoyment of full health. This symptom, however, is by no means conclusive, as these monthly periods are often interfered with otherwise, as heretofore described. If the absence of the menses are accompanied by other symptoms, it may be considered as a sign that the lady has ascended the first step towards motherhood.

Morning sickness appears generally within three to five weeks after conception. Sometimes, however, within a few days after, women during this stage suffer more or less from nausea, vomiting and general languid feeling, which is caused through intimate connections of the nerves throughout the body, and in consequence of the disturbances which are taking place, hence the sympathetic action of the stomach. This malady is sometimes quite distressing, but to use medicines would do no good whatever. When afflicted with it, women should eat as much fruit as possible and other articles of food which they know are easily digested by them.

When the digestion is good, tongue clear and no apparent cause otherwise of the bad feeling in the morning, when the first attempt to arise is made, the morning sickness in connection with the previous one, is an important link in that chain of evidence which indicates the pregnant condition. In some women this morning sickness does not appear at all.

Enlargement of the breasts. Usually within five to eight weeks after conception, often even earlier, there occurs a sensation of fulness, with throbbing and peculiar pain in the throat, and begin to be enlarged. Their size increases materially; to the touch they appear firmer and in the beginning of the change somewhat knotty. If this enlargement of the breast is caused by deposit of fat, the balance of the body would likely receive proportionate fatty increase. Hence when the development of the breast under presumable circumstances takes place, it is a sign, in connection with the other symptoms, of a pregnant state.

Darkening of the areola around the nipples. The color of the nipple

and areola of the virgin is usually but a shade or two deeper than that of the skin; but in about seven to eight weeks after conception, the circle, usually of a pinky color, around the nipples becomes several shades darker, and increases in extent and in depth of color as pregnancy progresses. This is usually only available as a symptom in the first pregnancy, and nearly an infallible one. In subsequent pregnancies it is of no value, as the color of the ring surrounding nipple remains. As the discoloration of the areola progresses, the nipples and surroundings become swollen puffy and somewhat moist. The veins beneath the skin of the breasts become visible.

Abdominal enlargement. It is caused through the gradual enlargement of the womb, in which the foetus grows, and unless some abdominal disease exists, is a very apt sign.

Quickening is the first motion of the foetus in the womb felt by the mother, occurring about the middle of the term of pregnancy. Especially when these movements are felt by another person, it may be regarded as an infallible sign of pregnancy, and if, till the date of the perception, any doubt has been entertained, four and one-half months may be reckoned till commencement of labor.

Physical diagnosis as to pregnancy, if further doubt exists, is better left to a physician, whose practical eye and touch will, with little trouble, demonstrate the true state of affairs. A very queer phenomena is often seen in hysterical women, who imagine themselves pregnant, and are not, in reality; their imagination carries them so far, that they have the morning sickness, about the tenth week feel the womb in the shape of a hardened ball in the vicinity of the pubis, in the fifteenth week, the ascension of the womb, halfway up to the navel, and in the twenty-second week right back of it, so that its depression is nearly obliterated. And all this trouble and anxiety for nothing and doomed in disappointment.

Birth may be expected, if you know the date of last menstruation, add to it seven days, and from product subtract three months. For instance, if your last menses occurred on January 1st, add seven days, which would be January 8th. Three months taken from it, brings the approximate day of birth to October 8, coming.

As soon as labor commences, the doctor, or midwife, who should have been forewarned in time, should be brought to the chamber, where confinement is to take place, and besides the professional man

or woman, and perhaps one nurse, all others should be rigidly excluded. The husband may also form an exception to this rule, provided he is not a so-called "overgrown baby," but is manly and energetic, and at the same time loving and tender.

The sick chamber for such occasion should be a model of neatness and simplicity. Especially should all upholstered furniture be excluded and thick inside curtains, as these articles are only repositories of dust, dirt and fferms for disease. In the first week of confinement and perhaps a day or so before, the room should be slightly darkened, but under this must not be also understood the exclusion of fresh pure air. Jadicious ventilation is of the utmost necessity, and also a little disinfectant in the shape of dissolved blue vitriol, placed in vessels about the room is highly recommendable. Upon entering a room where confinement has taken place, it should not be recognizeable by the odor, which one finds occasionally in apartments of this kind, or nurseries. The room should not be swept with a broom nor dusted, but be cleaned by means of dampened mop and cloths.

The bed of the young mother should be approachable from three sides. In winter not too close to the stove and in summer in not too close proximity to any window. It should consist of a spring mattress, a good horsehair or chuck mattress, and an oil cloth or rubber sheet, and covered with the usual sheets and blankets. You should also be careful to have in the room wash basin towels, clean hot and cold water, Carbolic Acid, 10% C. P., Bottle No. 5, Vaseline, Bottle No. 14. Also a fountain syringe, for the purpose of irrigating the sexual organ after birth; and in case of necessity to give an injection to mother in order to clean out the rectum. The bed pan should also be in the room.

No body should be allowed to come in contact with the young mother, to help her to stool or other necessary aid unless they wash their hands thoroughly, using a nail brush, and soap, and after wiping dry, rub a little carbolic acid 10% C. P., Bottle No. 5, on their hands. Physicians and midwives will always do this.

Delivery and directions for care of mother and child should be left to the physician or midwife, and the period of confinement should be superintended by an experienced nurse. These directions must be guided by circumstances, which, of course cannot be generalized

The following hints may be of service to the unexperienced, as to the mode of life they should pursue during pregnancy.

The diet should be simple, nutritious and easy of digestion, the food should be thoroughly masticated and very little cold drink should be taken during meal times. Pregnant women do not require much additional food, and large quantities, especially of rich dishes are entirely out of place. Stimulants partaken during pregnancy are hurtful, to both mother and child.

Common sense should teach every woman, who is in an interesting condition, to leave off lacing any way to such extent, as to suppress her protruding abdomen.

In order to retain good health during pregnancy, and to facilitate delivery, it is necessary that women in this condition should exercise by walking in the open air, every day, if the weather is favorable. This exercise should, however, be not to such extent, as to cause fatigue. If possible the walk should be taken in the morning. Carriage rides do not insure the movement and exercise of joints and muscles, as walking does, and, if taken on a rough road, in a vehicle with poor springs, often causes such shaking up as to result in evil consequences. All great mental exertions, emotions, grief, anger, despondency, as well as excessive physical labor, must be strictly avoided. Especially the latter should be specially guarded against as it takes much of the vitality of the body, which, towards the critical moment, must be husbanded, as all the strength is needed to give life to the little one. Many a good woman, while endeavoring to have everything in the best of order before her confinement, has overtaxed herself, and thereby wasted that strength she needed so much in the hour of delivery. The drain upon her vitality during the period of gestation, and that caused by the house work, she considered so necessary, exhausted her physical resources, and wasted, as contra-indicated by nature. Every woman must abide by the laws of nature, in such cases, even if they are not suitable to her. Any transgressions are severely punished and with it, grief is brought to the whole household and friends.

Ladies in an interesting condition, not taking the necessary healthful exercise, or eat such food, which is not easy of digestion, will invariably suffer from constipation towards the latter period of gestation. The rectum in such state should be regularly evacuated, especially on days immediately preceding confinement. If it cannot be effected by the diet, light injections of luke warm water should be resorted to. As remarked in preceding chapter, the physician or midwife should be called as soon as the first symptoms of labor make

their appearance. Should, however, through some unforeseen causes, the doctor or midwife fail to make their appearance and birth takes place before the arrival of either one, a nurse or friend of the family is usually around. In such cases we can only counsel to be calm, self-possessed and thoughtful and observe the following points, and if they are observed the safety and comfort of the patient is assured, at least, until such time as professional aid arrives.

For instance, if the head of the baby be first born, as is nearly always the case, that being the most advantageous position, and the face becomes darkened, it is a sign that the little one is in danger of suffocation. Assist by inserting your index finger under the armpits of the baby and by gently prying, assist thus in the delivery. Under no circumstances should the head be pulled, as such procedure is accompanied by dislocation of the neck. If the little body has appeared as far as breast, the remainder of the exit should not be facilitated. Nature after that will help itself.

As soon as the child is born, the nurse should at once remove it out of the way of the mother's discharges, place it where it has room to breath, and see that its mouth or nostrils is not covered. These orifices should also at once be inspected, and if any mucus be found therein, it is to be removed. Further attention is directed, as to whether the navel string be tight around the child's neck, if so, uncoil it at once in the most gentle manner in order to prevent strangulation.

To tie the navel or umbilical cord, take a strong piece of cotton or flax twine, which has first been saturated in carbolic acid 10% C. P., Bottle No. 5, using half pure water, and tie firmly by a double knot around the cord, about two inches from the body of the infant; two or three inches further from the body of the child apply a similar ligature, and cut between these two ligatures with a pair of blunt pointed scissors the umbilical cord. Especial attention is invited to the necessity of ascertaining whether the child has given the proper signs of life, before the navel cord is *either tied or cut*. Life manifests itself usually by breathing or crying and experienced women seldom make a mistake as to this.

The umbilical cord having been properly ligatured and divided, the baby should be washed in luke warm water and be properly dressed. No attempt should be made to pull at, or otherwise endeavor to remove the after-birth called placenta. The only permissible facilitation

of expulsion of the after-birth is gentle downward rubbing on the the abdomen over the approximate region of the womb. This procedure has a tendency to contract the womb, by which detachment and expulsion of the after-birth is usually affected. Whether the placenta is detached or not, can be felt by touching the lower part of the abdomen. If upon such examination, the womb feels as if contracted like a rather hard round substance, it is evident that detachment has taken place. The surest diagnosis, as to whether the after-birth has loosened, is made by taking hold of the protruding cord, and to gently, but firmly squeeze it. If pulsation is perceived, separation is not completed. Then gentle pressure on the lower abdomen should be resorted to again. As soon as pulsation stops entirely and the placenta is not expelled, it is lodged in the vagina. From there it can be removed by grasping by means of two fingers the placenta, immediately back of its insertion and assisting in its expulsion, by steadily but evenly in a spiral or twisting movement. Under no circumstances should force be resorted to. The spiral or twisting movement winds the membrane into a sort of rope, which is not likely to be torn. The removal of the after birth is better attended to before the griping pains ensue.

The first hour or two after the birth, the child should be kept as quiet as possible, and in case it sleeps, be left undisturbed. The mother likewise should not be disturbed and remain in the same position she was in during the birth. She should not be bothered with anything, save the removal of soiled napkins from her privates. Her position should be rendered as comfortable as possible and she should be not permitted to make the slightest exertions, as these are very apt to lead to haemorrhages. The tendency to these is much reduced after an hour or two. A cup of hot tea, or of strained oatmeal gruel, rather thin, may be given her.

If from the exertions she has undergone, her heart's action or pulse is very feeble, a tablespoonful of good old whiskey mixed with about two tablespoonfuls of water may be given, but it is better left to the discretion of the physician or nurse. Should the mother have a desire to urinate, soon after the labor, do not allow her to assume a sitting posture under any circumstances, but shove a bed pan or flat dish under her.

If all persons except the nurse are excluded from the sick chamber, the utmost quiet is obtained, the room well ventilated, at a proper temperature, the young mother usually succeeds in obtaining shortly

after the birth a nice little sleep of considerable duration, after which her exhausted energies become soon renewed. And if so, should no threatening symptoms forbid, the mother may be made comfortable and be placed in a clean and comfortable bed, or the one she occupies be fixed up with fresh linens, from which all dampness has been thoroughly abstracted. We remind the attendants again, that even during this process, the patient must not change her horizontal position. As soon thereafter as practicable, the nicely washed and dressed baby should be installed at the mother's breast, then to receive its daily bread for some time to come. By being relieved of some of the milk by her child has a tendency to contract the womb, by which further danger of haemorrhages are greatly reduced. The attendant should often examine the napkins, and ascertain if there is any undue bleeding. If such is the case, the directions of the attending physician should be strictly followed.

From the time labor has been completed, the mother and child made comfortable, no one should remain in the room, but the nurse, and the mother be induced to sleep, nature's best restorative.

The treatment of diseases arising from and during the labor of childbirth, cannot be generalized, inasmuch as they depend upon too many different circumstances, and should be left to the care of the attending physician. The learned man will notice symptoms, which the uneducated eye fails to detect and in the majority of cases, give counteracting remedies which stop the disease in its infancy. By such means he even avoids anxiety and fear in the patient, which is an aid to an earlier convalescence.

The diet during time immediately succeeding delivery, should be one of a very nourishing nature and at the same time easy of digestion. Within twenty-four hours after delivery, a nicely broiled mutton chop, or the breast of a spring chicken, with dry buttered toast, (cold) and a cup of black tea, may already be given. Oatmeal gruel, porridge of farina or arrow root, light farinaceous puddings and such like can be given for breakfast and supper in addition to the usual cup of tea and toast. Fruit and everything of an acid nature must be avoided for a considerable length of time, excepting perhaps dried apples or peaches, thoroughly stewed and sweetened.

An exclusive diet, during the period of confinement, of soups, gruels, porridges and similar articles, are only a relic of the past and should not be adhered to. The urgent advice of the good and wise old ladies,

to the contrary, notwithstanding, such diet has a tendency to distend the stomach, cause constipation and retard the healing processes.

Miscarriage, is the expulsion of the foetus, in the early months of pregnancy and before it is able to sustain life.

The causes for this unfortunate occurrence are a multitude; weak constitution, profuse menstruation, cramps in the womb, excessive and too energetic sexual intercourse during pregnancy, diseases of the womb and abdomen, late hours, overreaching as is often done in hanging curtains or pictures; falls on slippery floor or pavement, too much stair climbing or taking a false step; riding in vehicles without springs or on a rough road; dancing, tight lacing, too much work on sewing machine, diarrhoea, care, anger, grief, fright, or violent mental emotions.

Miscarriages usually happen to women, who lay themselves liable to above enumerated causes, and those who do not take any kind of gentle muscular exercise. When once it has happened to a lady, a predisposition is established and is very liable to occur again, unless the exciting causes are rigidly obviated.

As soon as a lady is positive that she is in state of pregnancy and feels indisposed to exertion, languid and in a similar manner as if the menses were about to return, she may consider herself liable to have a miscarriage. Are the symptoms more manifest by discharge of blood, cutting pain in loins and abdomen, recurring in fits, and increasing in intensity, she is threatened already with a miscarriage. The immediate symptoms, prior to the expulsion of the fetus, are slight pains gradually increasing, and recurring with much severity, bearing down of the womb, watery discharge and delivery of the fetus.

When the foregoing symptoms arise, quite rest is necessary, upon a hair or other mattress, in a horizontal posture, for a day or two, after that avoid any of the named causes. At the time the monthly period should occur, keep very quiet and avoid all sorts of excitement, both mental and physical. It is evident, that ladies with symptoms showing tendency towards miscarriage, must not grant any request from her husband. It is better that they do not sleep in the same bed. Temptation is too great. Let the husband show his manliness by controlling his passions by will-power, and in case that is insufficient, let him apply cold compresses to his private parts.

If miscarriage actually has taken place, the care and treatment is identical with that in case of childbirth. Husband and wife must after this occupy different rooms for at least two months.

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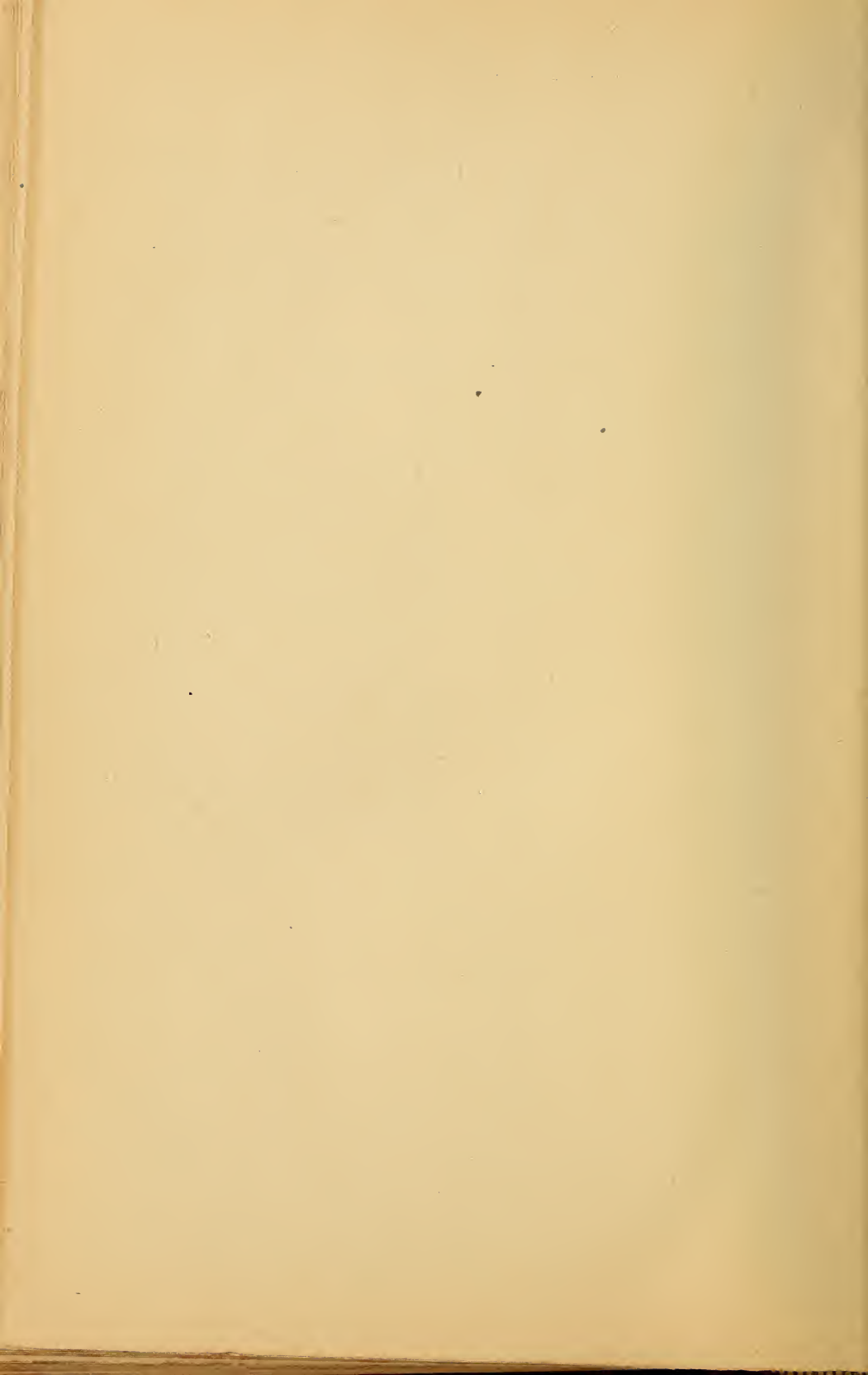
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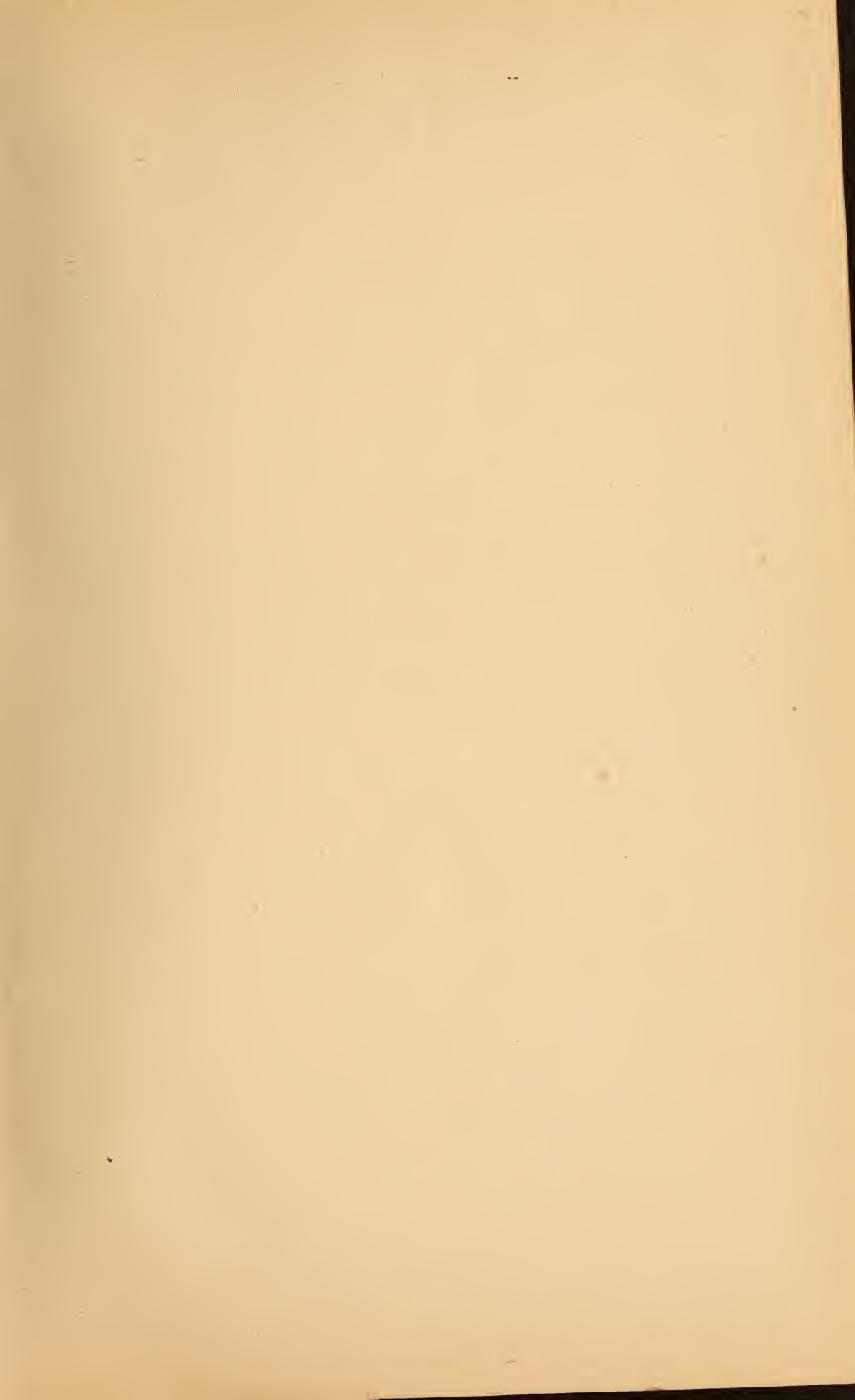
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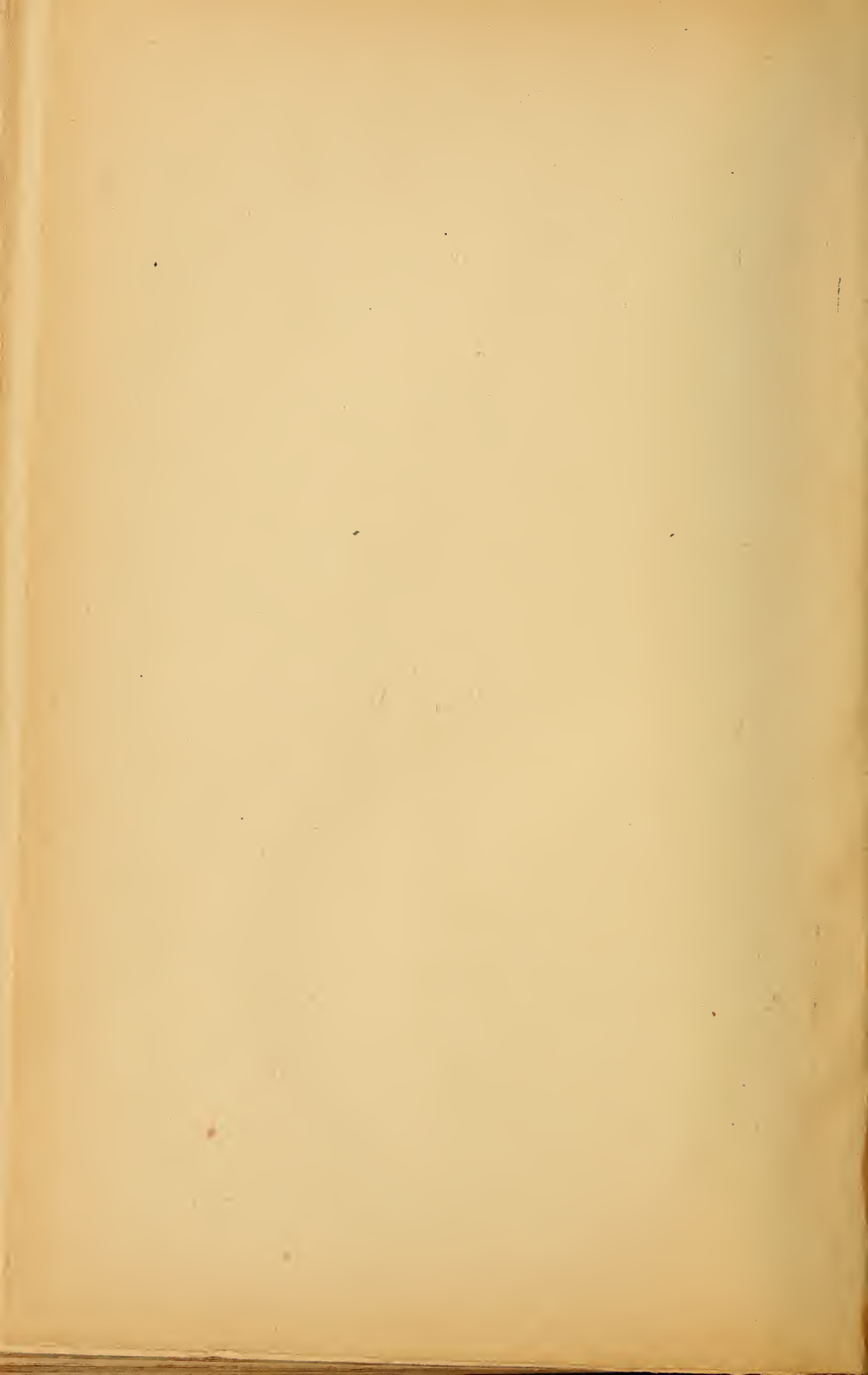
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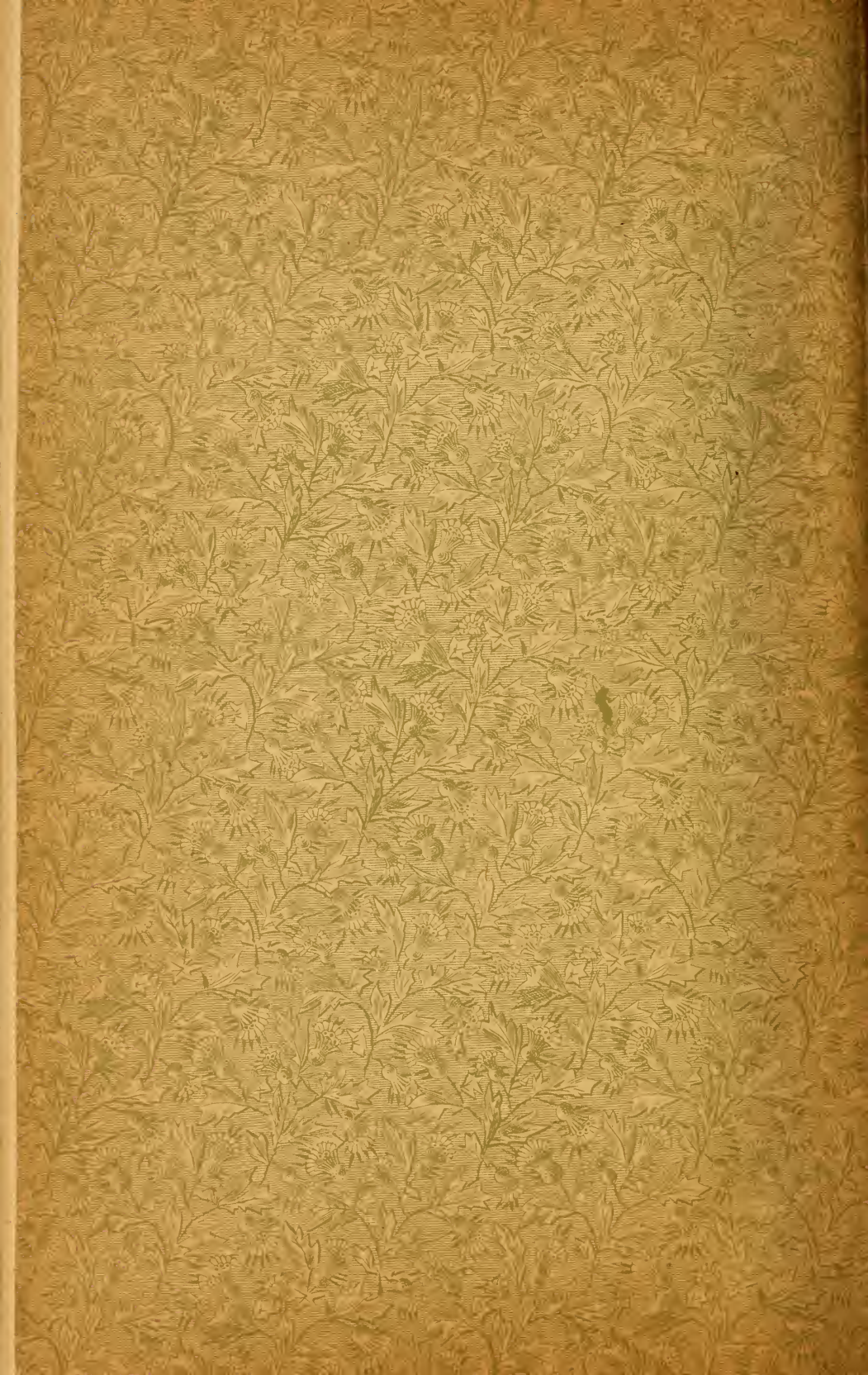
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